

United States District Court  
Northern District of California

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

TWILIO, INC.,

Plaintiff,

v.

TELESIGN CORPORATION,

Defendant.

Case No. 16-CV-06925-LHK

**ORDER GRANTING IN PART AND  
DENYING IN PART DEFENDANT'S  
MOTION TO DISMISS**

Re: Dkt. No. 31

Plaintiff Twilio, Inc. (“Twilio” or “Plaintiff”) filed a patent infringement suit against Defendant Telesign Corporation (“Telesign” or “Defendant”) and alleged that Defendant infringed the claims of U.S. Patent Nos. 8,306,021 (“the ’021 Patent”), 8,837,465 (“the ’465 Patent”), 8,755,376 (“the ’376 Patent”), 8,738,051 (“the ’051 Patent”), 8,737,962 (“the ’962 Patent”), 9,270,833 (“the ’833 Patent”), and 9,226,217 (“the ’217 Patent”) (collectively, the “Asserted Patents”). Before the Court is Defendant’s Motion to Dismiss, which seeks to dismiss all seven Asserted Patents. ECF No. 31 (“Mot.”). Due to the breadth of Defendant’s Motion to Dismiss, the Court will issue its decision in two orders. This order covers the ’962, ’833, ’021, ’465, and ’376 patents. Having considered the submissions of the parties, the relevant law, and the record in this case, the Court GRANTS IN PART and DENIES IN PART Defendant’s Motion to Dismiss

with respect to these patents.

## **I. BACKGROUND**

### **A. Factual Background**

#### **1. The Parties**

Plaintiff Twilio is a Delaware corporation with its primary place of business in San Francisco, California. ECF No. 1 (“Compl.”) ¶ 1. Plaintiff’s co-founder, Jeffrey Lawson, is a co-inventor on three of the Asserted Patents. ECF No. 45 at 1. Defendant Telesign is a California corporation with its principal place of business in Marina Del Rey, California. Compl. ¶ 15.

#### **2. The Twilio Patents**

Plaintiff’s complaint and the parties’ briefing divides the asserted patents into four families: (1) the ’962 and ’833 patents (the “Score Patents”), (2) the ’051 patent (the “Delivery Receipts Patent”), (3) the ’021, ’465, and ’376 patents (the “Platform Patents”), and (4) the ’217 patent (the “Path Selection Patent”). As mentioned above, this order covers the ’962, ’833, ’021, ’465, and ’376 patents, which are the patents from the Score Patents and Platform Patents families. An overview of the two patent families follows.

##### **a. The Score Patents**

###### **i. Specification**

The ’962 patent is titled “Method and System for Preventing Illicit Use of a Telephony Platform.” Compl, Ex. E (’962 patent). It was filed on July 24, 2013 and issued on May 27, 2014. It claims priority to a provisional application, which was filed on July 24, 2012.

The ’833 patent is also titled “Method and System for Preventing Illicit Use of a Telephony Platform.” Compl., Ex. F (’833 patent). It was filed on April 15, 2014 as a divisional application of the ’962 patent. It issued on February 23, 2016. Its specification is identical to the ’962 patent, and it also claims priority to the same July 24, 2012 provisional application.

The Score Patents generally relate to “preventing illicit use of a telephony platform.” ’962 patent at col. 1:15. As the Background section of the specification explains, “[t]elephone fraud has long been a problem for telephony systems.” *Id.* at col. 1:20-21. However, in recent years,

“the opportunities for telephony fraud is [sic] even greater.” *Id.* at col. 1:22-23. This is because “[t]he recent development of new telephony platforms . . . enable[] nefarious parties to create programs that commit telephony fraud.” *Id.* at col. 1:23-26. Examples of such fraud include toll fraud, chargebacks, and “us[ing] valuable resources for improper uses that would otherwise be used for legitimate applications.” *Id.* at col. 1:26-33.

The Score Patents purport to address telephony fraud through a method of “fraud scoring,” which “monitor[s], measure[s], and detect[s] instances of illicit use that occur within or through the communication platform.” *Id.* at col. 4:4-6. Figure 1 shows how this fraud scoring mechanism is deployed within a communication platform:

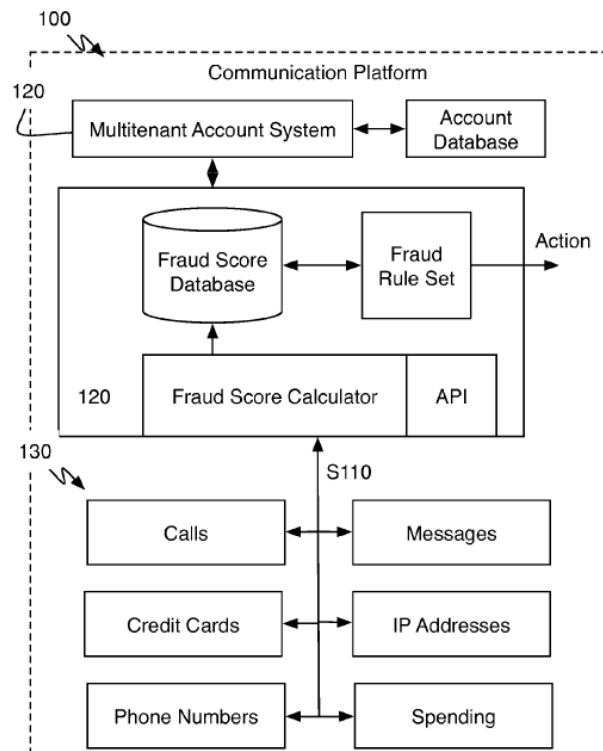
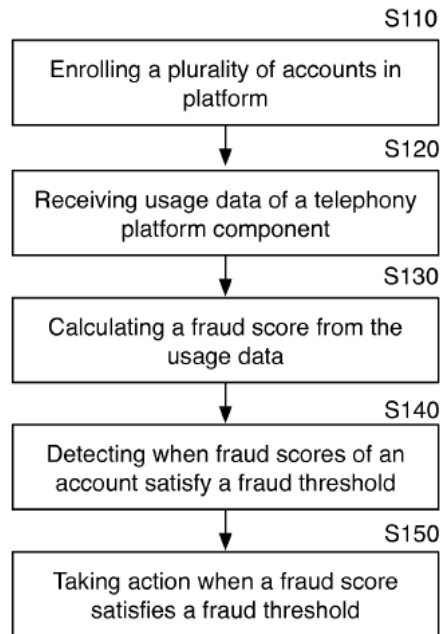


FIGURE 1

As Figure 1 illustrates, the fraud scoring method functions as a component of a communication platform. *Id.* at Fig. 1. The communication platform includes a multitenant account system, which “manage[s] and facilitate[s] the accounts within the communication platform.” *Id.* at col. 3:28-29. It also includes “operational components” which include “any servers, databases, processors or other resources that either define account configuration, account usage, or other

aspects of the account within the platform.” *Id.* at col. 5:33-36. The fraud scoring method utilizes the multitenant account system and the operational components of the communication platform. *Id.* at col. 2:16-35, 5:30-32, Fig. 1.

Figure 2 illustrates the operation of the fraud scoring method within the communication platform:



**FIGURE 2**

The first step, “enrolling a plurality of accounts in the platform,” refers to general account set up and configuration activities. *Id.* at col. 6:50-51. This includes associating an account with phone number(s), billing information, and relevant internet resources. *Id.* at col. 7:13-50. In the system, it is possible to create sub-accounts that correspond to a single, base account. *Id.* at col. 3:54-58. “For example, an application developer may create a customer service application, and then allow end users to signup as customers within his account.” *Id.* at col. 3:60-63. The customers’ accounts would then be sub-accounts of the customer service application’s account. *See id.* This allows both the customer and the customer service application to modify the customer accounts. *Id.* at col. 3:63-66.

The remaining steps describe the core fraud detection functionality. First, at step S120, the

1 fraud score method “receive[s] usage data of a telephony platform component.” *Id.* at col. 7:51-  
2 52, Fig. 2. This step “functions to collect data used to calculate a fraud score.” *Id.* at col. 7:53.  
3 Usage data can be pulled from “a variety of data sources,” including “call history databases,  
4 messaging history databases, account databases, credit card hash databases, account databases,  
5 client device information databases, IP address databases, phone number databases, credit card or  
6 spending databases, API logs, and/or any suitable machine containing data useful for calculating a  
7 fraud score.” *Id.* at col. 4:38, 8:3-9. For example, usage data stored in a call history database can  
8 include “call duration, account(s) associated with a call, call destination endpoints, caller  
9 endpoints, carrier origin of a call, destination carrier, frequency of calls, number of concurrent  
10 calls for an account, or any suitable parameter of call data.” *Id.* at col. 10:6-8.

11 Next, at step S130, the fraud score method “calculat[es] a fraud score from the usage data.”  
12 *Id.* at col. 8:55-56, Fig 2. This “functions to process usage data to generate metric that reflects the  
13 likelihood that illicit use of the telephony platform is occurring.” *Id.* at col. 8:56-58. To calculate  
14 a fraud score, the method uses a set of fraud rules. *Id.* at col. 8:58-59. Fraud rules can either be  
15 conditions within a single account, or patterns across multiple accounts. *Id.* at col. 8:64-66. When  
16 a fraud rule is triggered, the corresponding account(s) are assigned a fraud score, which is  
17 generally a “numeric value” but may be a “label or any suitable construct to communicate fraud  
18 likelihood.” *Id.* at col. 9:16-18, 23-25. A single account may have multiple fraud rules (and, as a  
19 result, multiple fraud scores) associated with it, which reflect different fraud detection heuristics.  
20 *Id.* at col. 9:30-36.

21 Next, at step S140, the method “detect[s] when fraud scores of an account satisfy a fraud  
22 threshold.” *Id.* at col. 11:64-65, Fig. 2. This “function[s] to monitor and assess when a scenario  
23 of illicit behavior is occurring based on the fraud scores.” *Id.* at col. 11:65-67. In one example,  
24 this is achieved by summing all the fraud scores across an account, and detecting when the sum is  
25 higher than a numeric threshold. *Id.* at col. 12:12-16.

26 Finally, at step S150, the method “tak[es] action when a fraud score satisfies a fraud  
27 threshold.” *Id.* at col. 12:27-28. This “functions to react to fraud scores that indicate illicit  
28

behavior.” *Id.* at col. 12:28-29. Examples of actions include “flagging the account, throttling communication of an account, requesting additional billing information, notifying account holder, notifying an analyst of the communication platform, performing additional fraud detection analysis on the account, blocking particular actions on the account, or performing any suitable action.” *Id.* at col. 12:29-35.

Neither the claims nor the specification provide much restriction on how these steps must be implemented. Instead, the specification makes a number of non-limiting statements, including: “The communication platform 100 can provide any suitable service.” *Id.* at col. 2:62-63. “The [fraud scoring] method is preferably used to prevent illicit use cases in . . . any suitable form of telephony communication.” *Id.* at col. 5:55-59. “The telephony platform components coupled to the fraud scoring system may include . . . any suitable machine containing data useful for calculating a fraud score.” *Id.* at col. 8:2-9. “[A]ny suitable usage data may . . . be used in calculating fraud score.” *Id.* at col. 9:55-56. And in particular, usage data associated with call history data may be “any suitable parameter of call data.” *Id.* at col. 10:7-8. Usage data associated with messaging history data may be “any suitable parameter of a message or messages sent through the telephony platform.” *Id.* at col. 10:40-41. “Usage data associated with platform account configuration data may include . . . any suitable platform account data.” *Id.* at col. 10:59-62. “[A]ny suitable parameters may be specified to determine a [fraud] rule set.” *Id.* at col. 13:6-7. “The fraud score is . . . any suitable construct to communicate fraud likelihood.” *Id.* at col. 9:22-24. Further, “any suitable relationship may be defined” between the fraud score and the likelihood of illicit use (e.g., the greater the score, the greater the likelihood, or vice versa). *Id.* at col. 9:24-26. “The reaction to a fraud score may include . . . performing any suitable action.” *Id.* at col. 12:29-35.

## ii. Asserted Claims

In its Complaint, Twilio alleges that Telesign infringes at least claim 1 of the ’962 patent and claim 5 of the ’833 patent. Compl. ¶¶ 75, 91. Claim 1 recites:

1. A method comprising:

enrolling a plurality of accounts on a telecommunications platform, wherein an account includes account configuration;

at a fraud detection system of the telecommunications platform, receiving account usage data, wherein the account usage data includes at least communication configuration data and billing configuration data of account configuration and further includes communication history of the plurality of accounts;

calculating fraud scores of a set of fraud rules from the usage data, wherein at least a sub-set of the fraud rules include conditions of usage data patterns between at least two accounts;

detecting when the fraud scores of an account satisfy a fraud threshold;

initiating an action response when a fraud score satisfies the fraud threshold.

'962 patent at col. 14:4-20.

Claim 5 of the '833 patent recites:

5. A method comprising: at a telecommunication platform:

enrolling a plurality of parent accounts in the telecommunication platform;

within a first enrolled account, enrolling at least one sub-account that is managed by the first account;

at a fraud detection system of the telecommunication platform, receiving sub-account usage data of a plurality of sub-accounts of the telecommunication platform, wherein the sub-account usage data of each of the plurality of sub-accounts includes at least configuration data of the sub-account and communication history data;

calculating fraud scores of a set of fraud scores from the sub-account usage data;

in a case where the set of fraud scores of a sub-account satisfy a fraud threshold, programmatically notifying the corresponding parent account of illicit behavior of the sub-account, the notification being provided via the telecommunication platform,

wherein illicit behavior includes at least one of toll fraud, spamming, terms of service violations, denial of service attacks, credit card fraud, suspicious behavior, and phishing attacks,

wherein the parent account is an account of an external service provider system, and

wherein each sub-account is an account of a system that uses a service of the external service provider system.

'833 patent at col. 15:9–col. 16:4.

**b. The Platform Patents**

**i. Specification**

The '021 patent is titled "System and Method for Processing Telephony Sessions." Compl. Ex. A ('021 patent). It was filed on April 2, 2009 and issued on November 6, 2012. It claims priority to three provisional applications, the earliest of which was filed on April 2, 2008.

The '465 and '376 patents are also titled "System and Method for Processing Telephony Sessions." Compl. Ex. B ('465 patent); Compl. Ex. C ('376 patent). The '465 patent was filed on January 16, 2013 and issued on September 16, 2014. The '376 patent was filed on January 16, 2013 and issued on June 17, 2014. Both patents are continuations of another patent application, which is a continuation of the '021 patent. Accordingly, all three Platform Patents share the same specification and priority date.

The Platform Patents generally relate to "[a] system and method for processing telephony sessions." '021 patent at col. 1:25-26. Telephony sessions, such as a phone call initiated over a public switched telephone network ("PSTN") or a text message sent over the Short Message Service (SMS), are communications from one point to another. *See id.* at col. 3:16-53. However, these communications can be combined with computer logic to create interactive applications, such as an automated customer service hotline, *see id.* at col. 15:60-65, or a dial-in conferencing service, *see id.* at col. 16:11-20. In order to accomplish this, communication signals need to be "processed" so that input from the user (e.g., a button pressed, text sent, spoken response) is sent to the computer logic, and the appropriate response is sent back. *See generally id.* at col. 6:48-8:5. For example, processing a call to a customer service hotline would include detecting that the user selected, say, a "2" from the initial menu, and then retrieving and playing a recording for the new set of menu options to which option "2" corresponds. *See, e.g., id.* at col. 15:49-16:4, Fig. 7.

The Background section of the specification explains that, at the time of patenting, implementation of these interactive applications was complicated. *Id.* at col. 1:30-58. At that time, "legislation and the advent of Voice over Internet Protocol (VoIP) ha[d] revolutionized the communication industry." *Id.* at col. 1:30-32. There were new technologies for interactive



1 applications, accompanied by new business models, and service providers. *Id.* at col. 1:32-33.  
 2 For example, “[o]ne c[ould] implement extensible call switching and voice application logic in  
 3 Open source software applications, such as Asterisk and FreeSwitch.” *Id.* at col. 1:34-36.  
 4 However, getting these modern applications to work with traditional communications networks—  
 5 such as telephone networks that handled voice communications and SMS messaging—presented  
 6 “new complexities and challenges.” *Id.* at col. 1:38. In particular, “[d]eploying telephony services  
 7 require[d] knowledge of voice networking and codecs, hardware or services to bridge servers to  
 8 the public phone infrastructure, capital investment in hardware, and ongoing collocation of that  
 9 hardware.” *Id.* at col. 1:39-43. In addition, the actual interactive application itself had to be  
 10 developed, which “require[d] developers to train in new languages, tools, and development  
 11 environments.” *Id.* at col. 1:45-46. Finally, “[o]ngoing operation and maintenance of these  
 12 services require[d] teams to adopt new analysis tools, performance metrics, and debugging  
 13 methodologies.” *Id.* at col. 1:50-53. All of these efforts were costly, requiring “significant  
 14 upfront and ongoing investment.” *Id.* at col. 1:54-55.

15 The Processing Patents purport to address these problems by providing a way for a modern  
 16 applications to interact with traditional communication networks that mimics web-based  
 17 programming. *See id.* at col. 2:1-18. In particular, this solution “use[s] the familiar web site  
 18 visitor model,” where each step of a phone call is made to act like a web page. *Id.* at col. 2:5-8.  
 19 For example, in one embodiment, input that a user enters into his telephone (e.g., pressing a “2” in  
 20 the automated customer hotline example) is sent to the application via HTTP POST, the same  
 21 mechanism that is used when a user submits a form on a website. *See id.* at col. 4:49-57, Fig. 7.  
 22 The methods and systems also leverage “familiar concepts such as HTTP redirects, accessing  
 23 resources through an API, cookies, and mime-type responses.” *Id.* at col. 2:9-11. According to  
 24 the Processing Patents, this reduces complexity and expense because it “enables web developers to  
 25 use their existing skills and tools with the esoteric world of telephony, making telephony  
 26 application development as easy as web programming.” *Id.* at col. 2:2-5.

In the Processing Patents, the ability to interact with a traditional communication network in a web-like way is accomplished through a “call router,” which sits between the traditional communication network and the modern application and translates between the two. *Id.* at col. 6:49-8:5, 13:12-14:14. Figures 2A and 3A show this setup for a modern application communicating with a traditional phone line:

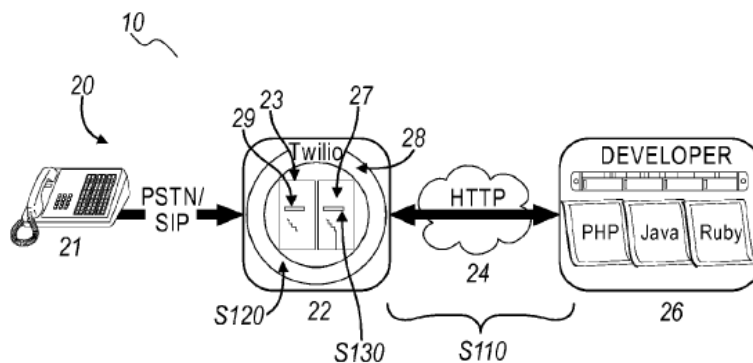


FIG. 2A

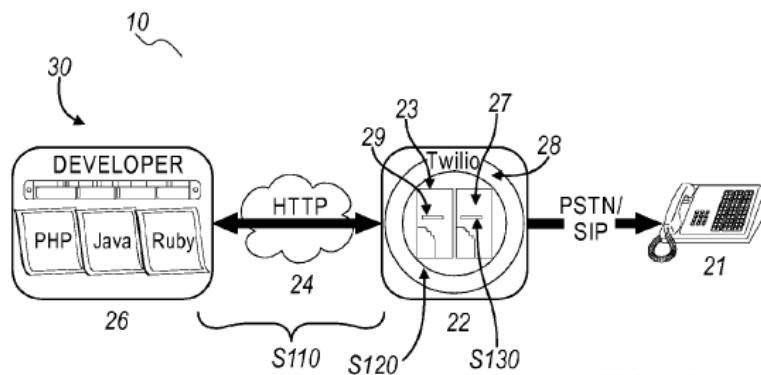
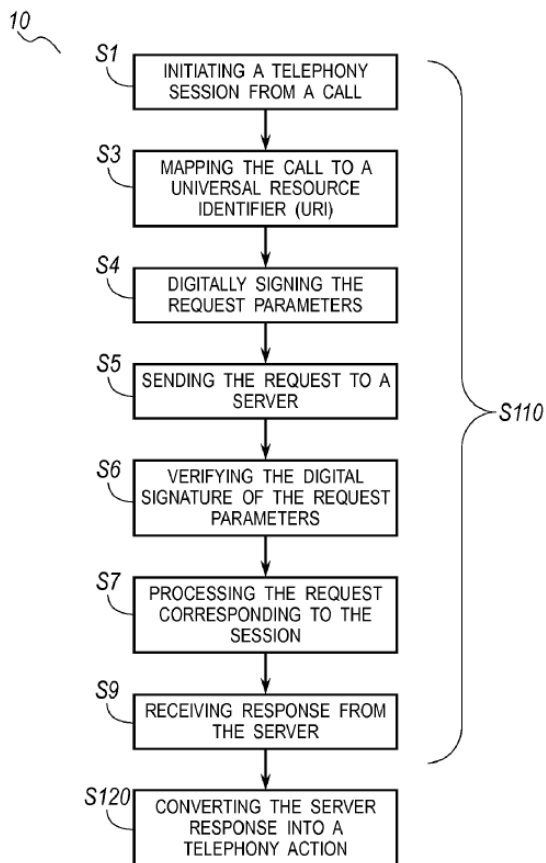


FIG. 3A

Item 26 represents a server that runs the modern application (“application server”), such as code that implements the tree of menu options in a customer service hotline. *Id.* at col. 14:15-15:47. It communicates with the call router, item 22, using familiar web-like constructs. *Id.* at col. 13:29-14:14. The call router then takes these web-based descriptions of interactions and translates them into telephone signals that can be sent to the user’s telephone, item 21, over a traditional telephone network, and vice versa. *Id.* at col. 6:49-8:5, 13:12-14:14. For example, the call router is able to detect the signal indicating that a user pressed a “2” coming from a traditional telephone line, translate that into an HTTP POST response, and send that over the internet to the application server. *See id.* at col. 13:12-14:14, Fig. 7.

Figure 1 illustrates the operation of the call router, the application server, and the communication network:



**FIG. 1**

The call router communicates with the application server using an “application layer protocol,” such as HTTP or HTTPS. *Id.* at col. 14:24-26. The location of the application server, or an application hosted on an application server, is identified using a universal resource identifier (“URI”). *Id.* at col. 14:21-23. When a user initiates a telephony session (such as a phone call), the call router determines the URI that corresponds to the application server responsible for handling that call, and maps the call to that URI. *Id.* at col. 3:54-4:10. (For example, if a user calls a dial-in voice conferencing number, the call router maps that number to the URI for the server hosting the conferencing application. *See id.* at col. 3:54-4:10, 15:51-54.) The call router then communicates that a new call was initiated to the application server by digitally signing any parameters associated with the call, such as the caller’s number, the number they are calling, and their account

ID, and sending this information to the application server as a web request. *Id.* at col. 4:11-5:46, 13:29-14:14, Figs. 4A-F. The application server then determines the next action that should be taken, and sends this information back to the call router as a response. *Id.* at col. 6:15-48, Figs. 5A-B. (For example, if a user calls a dial-in voice conferencing number, the conferencing application may determine that the next step would be to play a greeting asking the user to enter his conference ID. *See id.* at Fig. 7. In this case, it sends back a response to the call router with an audio file for this greeting and instructions to play it. *See id.*) The call router receives this response and converts it into a “telephony action.” *Id.* at col. 6:49-8:5. It does this by sending the appropriate signals over the telephone network to the user’s phone. *Id.* at col. 6:49-64. Any subsequent input from the user is processed as a new request using this same request and response pattern. *See, e.g., id.* at Figs. 12-15.

In addition to translating and relaying signals between the communication network and the application server, the call router also stores state information about the telephony session, such as the number associated with a particular call, *id.* at col. 10:1-4, the number to which a call was directed, *id.* at col. 10:29-32, or the current state of a call (e.g., in-progress, completed, failed, not yet initiated), *id.* at col. 10:40-42. It then makes this information accessible to the application server through a Call Router Application Programming Interface (“API”), which the application server can use at any time. *Id.* at col. 8:52-54; *see generally id.* at col. 8:7-12:64. In addition, the application server can use the Call Router API to direct the call router to take certain actions, such as modify information stored by the call router relating to calls or preform operations on an existing call. *Id.* at col. 9:42-48. For example, the application server can direct the call router to modify data about the number that a call was initiated from, *id.* at col. 10:1-4, or change the state of a current call (e.g., hanging up a current call, transferring a current call, or initiating recording of a current call), *id.* at col. 10:42-53.

This functionality is implemented through “resources” located on the call router, which are web-accessible data elements that each are associated with their own URIs. *Id.* at col. 9:33-40. Using the Call Router API, the application server can access or modify a resource by performing

HTTP actions (e.g., POST, PUT, GET, or DELETE) on its associated URI. *Id.* For example, information about the number from which a particular call was initiated is associated with the “caller ID resource.” *Id.* at col. 10:1-4. To request the number from which a particular call was initiated, the application server can send a GET request to the URI of the caller ID resource. *See id.* at col. 9:42-46, 10:1-4. The call router then sends a response to the application server with that information. *Id.* at col. 10:1-4. These resources allow the application server to access information it needs about the telephony session using familiar web-programming constructs. *See id.* at col. 8:7-51.

## ii. Asserted Claims

In its Complaint, Twilio alleges that Telesign infringes at least claim 13 of the ’021 patent. Compl. ¶ 135. Claim 13 recites:

13. A method comprising:

- communicating with an application server using an application layer protocol;
- processing telephony instructions with a call router;
- creating call router resources accessible through a call router Application Programming Interface (API), wherein the call router resources are accessible by outside devices at an addressable Uniform Resource Identifier (URI);
- mapping a telephony session to the URI, the URI being associated with the application server;
- sending a request to the application server;
- embedding state information of the telephony session in the request;
- receiving from the application server a response comprising telephony instructions for sequential processing;
- receiving an API request from the application server for interaction with a resource; and
- responding to an API request based on the interaction with a resource.

’021 patent at col. 19:19–col. 20:2.

Twilio also alleges that Telesign infringes at least claim 1 of the ’465 patent. Compl. ¶ 156. Claim 1 recites:

1. A method for processing a telephony communication comprising:

associating an initial URI with a telephony endpoint;

initiating a telephony voice session for a telephony communication to the telephony endpoint;

mapping the initial URI to the telephony session;

sending an application layer protocol request to an application resource specified by the URI and embedding state information of the telephony voice session in the request;

receiving a response to the application layer protocol request sent to the application resource, wherein the response includes a document of telephony instructions; and

executing telephony actions during the telephony voice session according to a sequential processing of at least a subset of the telephony instructions of the response.

'465 patent at col. 18:37-54.

Twilio also alleges that Telesign infringes at least claim 1 of the '376 patent. Compl. ¶

169. Claim 1 recites:

1. A method comprising:

operating a telephony network and internet connected system cooperatively with a plurality of application programming Interface (API) resources, wherein operating the system comprises:

initiating a telephony session,

communicating with an application server to receive an application response,

converting the application response into executable operations to process the telephony session,

creating at least one informational API resource; and

exposing the plurality of API resources through a representational state transfer (REST) API that comprises:

receiving a REST API request that specifies an API resource URI, and

responding to the API request according to the request and the specified resource URI.

'376 patent at col. 18:29-45.

## B. Procedural History

On December 1, 2016, Plaintiff filed the instant patent infringement suit. In its complaint, Plaintiff alleged that Defendant “has infringed and continues to infringe one or more claims of the [Asserted Patents].” Compl. ¶ 75, 91, 106, 135, 156, 169, 184. The products accused included “Defendant’s Smart Verify product,” “Auto Verify product,” “SMS Verify product,” “Voice Verify Product,” “Push Verify product,” and “Score and Phone ID products.” *Id.* ¶¶ 40-45.

On January 25, 2017, Defendant filed the instant Motion to Dismiss, ECF No. 31 (“Mot.”). On February 9, 2017, Plaintiff filed an opposition to Defendant’s Motion to Dismiss, ECF No. 37 (“Opp’n”), and on February 15, 2017, Defendant filed a reply, ECF No. 39 (“Reply”).

On March 30, 2017, the Court ordered the parties to disclose the asserted claims and accused products identified in Plaintiff’s infringement contentions. ECF No. 53. On March 31, 2017, the parties disclosed these asserted claims and accused products. ECF No. 55.

## II. LEGAL STANDARD

### A. Motion to Dismiss Pursuant to Federal Rule of Civil Procedure 12(b)(6)

Pursuant to Federal Rule of Civil Procedure 12(b)(6), a defendant may move to dismiss an action for failure to allege “enough facts to state a claim to relief that is plausible on its face.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007). “A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged. The plausibility standard is not akin to a ‘probability requirement,’ but it asks for more than a sheer possibility that a defendant has acted unlawfully.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (internal citations omitted). For purposes of ruling on a Rule 12(b)(6) motion, the Court “accept[s] factual allegations in the complaint as true and construe[s] the pleadings in the light most favorable to the nonmoving party.” *Manzarek v. St. Paul Fire & Marine Ins. Co.*, 519 F.3d 1025, 1031 (9th Cir. 2008).

Nonetheless, the Court is not required to “‘assume the truth of legal conclusions merely because they are cast in the form of factual allegations.’” *Fayer v. Vaughn*, 649 F.3d 1061, 1064 (9th Cir. 2011) (quoting *W. Mining Council v. Watt*, 643 F.2d 618, 624 (9th Cir. 1981)). Mere



“conclusory allegations of law and unwarranted inferences are insufficient to defeat a motion to dismiss.” *Adams v. Johnson*, 355 F.3d 1179, 1183 (9th Cir. 2004); *accord Iqbal*, 556 U.S. at 678. Furthermore, “‘a plaintiff may plead [him]self out of court’” if he “plead[s] facts which establish that he cannot prevail on his . . . claim.” *Weisbuch v. Cty. of L.A.*, 119 F.3d 778, 783 n.1 (9th Cir. 1997) (quoting *Warzon v. Drew*, 60 F.3d 1234, 1239 (7th Cir. 1995)).

#### **B. Motions to Dismiss for Patent Validity Challenges Under 35 U.S.C. § 101**

Defendant’s Motion asserts that the Asserted Patents fail to claim patent-eligible subject matter under 35 U.S.C. § 101 in light of the United States Supreme Court’s decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). Whether a claim recites patent-eligible subject matter under § 101 is a question of law. *In re Roslin Inst. (Edinburgh)*, 750 F.3d 1333, 1335 (Fed. Cir. 2014) (“Section 101 patent eligibility is a question of law[.]”); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) (same). Accordingly, a district court may resolve the issue of patent eligibility under § 101 by way of a motion to dismiss. *See, e.g., Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1345 (Fed. Cir. 2014) (affirming determination of ineligibility made on 12(b)(6) motion); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713 (Fed. Cir. 2014) (same); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1351 (Fed. Cir. 2014) (affirming determination of ineligibility made on motion for judgment on the pleadings).

Although claim construction is often desirable, and may sometimes be necessary, to resolve whether a patent claim is directed to patent-eligible subject matter, the Federal Circuit has explained that “claim construction is not an inviolable prerequisite to a validity determination under § 101.” *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (U.S.)*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2013). Where the court has a “full understanding of the basic character of the claimed subject matter,” the question of patent eligibility may properly be resolved on the pleadings. *Content Extraction*, 776 F.3d at 1349; *see also Cardpool, Inc. v. Plastic Jungle, Inc.*, 2013 WL 245026, at \*4 (N.D. Cal. Jan. 22, 2013) (same), *aff’d*, 817 F.3d 1316 (Fed. Cir. 2016).



## C. Substantive Legal Standards Applicable Under 35 U.S.C. § 101

### 1. Patent-Eligible Subject Matter Under 35 U.S.C. § 101

Section 101 of Title 35 of the United States Code “defines the subject matter that may be patented under the Patent Act.” *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). Under § 101, the scope of patentable subject matter encompasses “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” *Id.* (quoting 35 U.S.C. § 101). These categories are broad, but they are not limitless. Section 101 “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice*, 134 S. Ct. at 2354 (quotation marks omitted). These three exceptions are not patent-eligible because “they are the basic tools of scientific and technological work,” which are “free to all men and reserved exclusively to none.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quotation marks omitted). The United States Supreme Court has explained that allowing patent claims for such purported inventions would “tend to impede innovation more than it would tend to promote it,” thereby thwarting the primary object of the patent laws. *Id.* at 70. However, the United States Supreme Court has also cautioned that “[a]t some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Alice*, 134 S. Ct. at 2354 (quotation marks and alterations omitted). Accordingly, courts must “tread carefully in construing this exclusionary principle lest it swallow all of patent law.” *Id.*

In *Alice*, the leading case on patent-eligible subject matter under § 101, the United States Supreme Court refined the “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts” originally set forth in *Mayo*, 566 U.S. at 77. This analysis, generally known as the “*Alice*” framework, proceeds in two steps as follows:

First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, “[w]hat else is there in the claims before us?” To answer that question, we consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. We have described step two of this analysis as a search for an “‘inventive concept’

1 “—i.e., an element or combination of elements that is “sufficient to ensure that the  
2 patent in practice amounts to significantly more than a patent upon the [ineligible  
concept] itself.”

3 *Alice*, 134 S. Ct. at 2355 (citations omitted and alterations in original); *see also In re TLI*  
4 *Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (describing “the now familiar  
5 two-part test described by the U.S. Supreme Court in *Alice*”).

## 6 **2. *Alice* Step One—Identification of Claims Directed to an Abstract Idea**

7 Neither the U.S. Supreme Court nor the Federal Circuit has set forth a bright line test  
8 separating abstract ideas from concepts that are sufficiently concrete so as to require no further  
9 inquiry under the first step of the *Alice* framework. *See, e.g., Alice*, 134 S. Ct. at 2357 (noting that  
10 “[the U.S. Supreme Court] need not labor to delimit the precise contours of the ‘abstract ideas’  
11 category in this case”); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir.  
12 2014) (observing that the U.S. Supreme Court did not “delimit the precise contours of the ‘abstract  
13 ideas’ category in *Alice*”) (quotation marks omitted). As a result, in evaluating whether particular  
14 claims are directed to patent-ineligible abstract ideas, courts have generally begun by  
15 “compar[ing] claims at issue to those claims already found to be directed to an abstract idea in  
16 previous cases.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

17 Two of the U.S. Supreme Court’s leading cases concerning the “abstract idea” exception  
18 involved claims held to be abstract because they were drawn to longstanding, fundamental  
19 economic practices. *See Alice*, 134 S. Ct. at 2356 (claims “drawn to the concept of intermediated  
20 settlement, i.e., the use of a third party to mitigate settlement risk” were directed to an  
21 unpatentable abstract idea); *Bilski*, 561 U.S. at 611-12 (claims drawn to “the basic concept of  
22 hedging, or protecting against risk” were directed to an unpatentable abstract idea because  
23 “[h]edging is a fundamental economic practice long prevalent in our system of commerce and  
24 taught in any introductory finance class.”) (quotation marks omitted).

25 Similarly, the U.S. Supreme Court has recognized that information itself is intangible. *See*  
26 *Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12, 127 S. Ct. 1746, 167 L.Ed.2d 737  
27 (2007). Accordingly, the Federal Circuit has generally found claims abstract where they are

1 directed to some combination of collecting information, analyzing information, and/or displaying  
2 the results of that analysis. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094-95  
3 (Fed. Cir. 2016) (claims “directed to collecting and analyzing information to detect misuse and  
4 notifying a user when misuse is detected” were drawn to an unpatentable abstract idea); *In re TLI*  
5 *Commc’ns LLC Patent Litig.*, 823 F.3d at 611 (claims were “directed to the abstract idea of  
6 classifying and storing digital images in an organized manner”); *Elec. Power Grp., LLC v. Alstom*  
7 *S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (claims directed to an abstract idea because “[t]he  
8 advance they purport to make is a process of gathering and analyzing information of a specified  
9 content, then displaying the results, and not any particular assertedly inventive technology for  
10 performing those functions”); *see also id.* (collecting cases).

11 However, the determination of whether other types of computer-implemented claims are  
12 abstract has proven more “elusive.” *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790  
13 F.3d 1343, 1345 (Fed. Cir. 2015) (“[P]recision has been elusive in defining an all-purpose  
14 boundary between the abstract and the concrete.”) As a result, in addition to comparing claims to  
15 prior U.S. Supreme Court and Federal Circuit precedents, courts considering computer-  
16 implemented inventions have taken varied approaches to determining whether particular claims  
17 are directed to an abstract idea.

18 For example, courts have considered whether the claims purport to “improve the  
19 functioning of the computer itself,” *Alice*, 134 S. Ct. at 2359, which may suggest that the claims  
20 are not abstract, or instead whether “computers are invoked merely as a tool” to carry out an  
21 abstract process. *Enfish*, 822 F.3d at 1335; *see also id.* (noting that “some improvements in  
22 computer-related technology when appropriately claimed are undoubtedly not abstract, such as a  
23 chip architecture, an LED display, and the like. Nor do we think that claims directed to software,  
24 as opposed to hardware, are inherently abstract[.]”). The Federal Circuit has followed this  
25 approach to find claims patent-eligible in several cases. *See id.* at 1335-36 (claims directed to a  
26 specific type of self-referential table in a computer database were not abstract because they  
27 focused “on the specific asserted improvement in computer capabilities (i.e., the self-referential

table for a computer database”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (claims directed to automating part of a preexisting method for 3-D facial expression animation were not abstract because they “focused on a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type.”).

Similarly, the Federal Circuit has found that claims directed to a “new and useful technique” for performing a particular task were not abstract. *Thales Visionix Inc. v. United States*, No. 2015-5150, 2017 WL 914618, at \*5 (Fed. Cir. Mar. 8, 2017) (holding that “claims directed to a new and useful technique for using sensors to more efficiently track an object on a moving platform” were not abstract); *Rapid Litigation Management Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1045, 1050 (Fed. Cir. 2016) (holding that claims directed to “a new and useful laboratory technique for preserving hepatocytes,” a type of liver cell, were not abstract); *see also Diamond v. Diehr*, 450 U.S. 175, 177, 101 S. Ct. 1048, 67 L.Ed.2d 155 (1981) (holding that claims for a method to calculate the optimal cure time for rubber were not abstract).

Another helpful tool used by courts in the abstract idea inquiry is consideration of whether the claims have an analogy to the brick-and-mortar world, such that they cover a “fundamental . . . practice long prevalent in our system . . . .” *Alice*, 134 S. Ct. at 2356; *see, e.g., Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (finding an email processing software program to be abstract through comparison to a “brick and mortar” post office); *Intellectual Ventures I LLC v. Symantec Corp.*, 100 F. Supp. 3d 371, 383 (D. Del. 2015) (“Another helpful way of assessing whether the claims of the patent are directed to an abstract idea is to consider if all of the steps of the claim could be performed by human beings in a non-computerized ‘brick and mortar’ context.”) (citing *buySAFE*, 765 F.3d at 1353).

Courts will also (or alternatively, as the facts require) consider a related question of whether the claims are, in essence, directed to a mental process or a process that could be done with pen and paper. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1147 (Fed. Cir. 2016) (claims for translating a functional description of a logic circuit into a hardware component description of the logic circuit were invalid because they “can be performed mentally or with

pencil and paper”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (claim for verifying the validity of a credit card transaction over the Internet was invalid because the “steps can be performed in the human mind, or by a human using a pen and paper”); *see also, e.g., Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (claims for computer-implemented system to enable borrowers to anonymously shop for loan packages were abstract where “[t]he series of steps covered by the asserted claims . . . could all be performed by humans without a computer”).<sup>1</sup>

Regardless of the particular analysis that is best suited to the specific facts at issue in a case, however, the Federal Circuit has emphasized that “the first step of the [*Alice*] inquiry is a meaningful one, i.e., . . . a substantial class of claims are *not* directed to a patent-ineligible concept.” *Enfish*, 822 F.3d at 1335 (emphasis in original). The court’s task is thus not to determine whether claims merely involve an abstract idea at some level, *see id.*, but rather to examine the claims “in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents*, 790 F.3d at 1346.

### 3. *Alice* Step Two—Evaluation of Abstract Claims for a Limiting Inventive Concept

A claim drawn to an abstract idea is not necessarily invalid if the claim’s limitations—considered individually or as an ordered combination—serve to “transform the claims into a patent-eligible application.” *Content Extraction*, 776 F.3d at 1348. Thus, the second step of the *Alice* analysis (the search for an “inventive concept”) asks whether the claim contains an element or combination of elements that ensures that the patent in practice amounts to significantly more than a patent upon the abstract idea itself. *Alice*, 134 S. Ct. at 2355.

The U.S. Supreme Court has made clear that a transformation of an abstract idea to a patent-eligible application of the idea requires more than simply reciting the idea followed by

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<sup>1</sup> One court has noted that, like all tools of analysis, the “pencil and paper” analogy must not be unthinkingly applied. *See California Inst. of Tech. v. Hughes Commc’ns Inc.*, 59 F. Supp. 3d 974, 995 (C.D. Cal. 2014) (viewing pencil-and-paper test as a “stand-in for another concern: that humans engaged in the same activity long before the invention of computers,” and concluding that test was unhelpful where “error correction codes were not conventional activity that humans engaged in before computers”).

“apply it.” *Id.* at 2357 (quoting *Mayo*, 132 S. Ct. at 1294). In that regard, the Federal Circuit has repeatedly held that “[f]or the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than the performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction*, 776 F.3d at 1347-48 (quoting *Alice*, 134 S. Ct. at 2359) (alterations in original); *see also Mortgage Grader*, 811 F.3d at 1324–25 (holding that “generic computer components such as an ‘interface,’ ‘network,’ and ‘database’ . . . do not satisfy the inventive concept requirement.”); *Bancorp Servs.*, 687 F.3d at 1278 (“To salvage an otherwise patent-ineligible process, a computer must be integral to the claimed invention, facilitating the process in a way that a person making calculations or computations could not.”). Similarly, “[i]t is well-settled that mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea” where those components simply perform their “well-understood, routine, conventional” functions. *In re TLI Commc’ns.*, 823 F.3d at 613 (limitations of “telephone unit,” “server,” “image analysis unit,” and “control unit” insufficient to satisfy *Alice* step two where claims drawn to abstract idea of classifying and storing digital images in an organized manner) (quotation marks omitted).

In addition, the U.S. Supreme Court explained in *Bilski* that “limiting an abstract idea to one field of use or adding token postsolution components [does] not make the concept patentable.” 561 U.S. at 612 (citing *Parker v. Flook*, 437 U.S. 584 (1978)); *see also Alice*, 134 S. Ct. at 2358 (same). The Federal Circuit has similarly stated that attempts “to limit the use of the abstract idea to a particular technological environment” are insufficient to render an abstract idea patent eligible. *Ultramercial*, 772 F.3d at 716 (quotation marks omitted); *see also Intellectual Ventures*, 792 F.3d at 1366 (“An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment, such as the Internet.”).

In keeping with these restrictions, the Federal Circuit has found that claims “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” can be sufficiently transformative to supply an inventive concept. *DDR*, 773



1 F.3d at 1257 (claims that addressed the “Internet-centric problem” of third-party merchant  
2 advertisements that would “lure . . . visitor traffic away” from a host website amounted to an  
3 inventive concept).

4 In addition, a “non-conventional and non-generic arrangement of known, conventional  
5 pieces” can amount to an inventive concept. *BASCOM*, 827 F.3d at 1350. For example, in  
6 *BASCOM*, the Federal Circuit addressed a claim for internet content filtering performed at “a  
7 specific location, remote from the end-users, with customizable filtering features specific to each  
8 end user.” *Id.* Because this “specific location” was different from the location where internet  
9 content filtering was traditionally performed, the Federal Circuit concluded this was a “non-  
10 conventional and non-generic arrangement of known, conventional pieces” that provided an  
11 inventive concept. *Id.* As another example, in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, the  
12 Federal Circuit found that claims relating to solutions for managing accounting and billing data  
13 over large, disparate networks recited an inventive concept because they contained “specific  
14 enhancing limitation[s] that necessarily incorporate[d] the invention’s distributed architecture.”  
15 841 F.3d 1288, 1301 (Fed. Cir. 2016). The use of a “distributed architecture,” where information  
16 about accounting and billing data was stored near the source of the information in the “disparate  
17 networks,” transformed the claims into patentable subject matter. *Id.*

#### 18 **4. Preemption**

19 In addition to these principles, courts sometimes find it helpful to assess claims against the  
20 policy rationale for § 101. The United States Supreme Court has recognized that the “concern that  
21 undergirds [the] § 101 jurisprudence” is preemption. *Alice*, 134 S. Ct. at 2358. Thus, if a claim is  
22 so abstract so as to “pre-empt use of [the claimed] approach in all fields, and would effectively  
23 grant a monopoly over an abstract idea,” it is not patent-eligible. *Bilski* 561 U.S. at 612.  
24 However, the inverse is not true: “[w]hile preemption may signal patent ineligible subject matter,  
25 the absence of complete preemption does not demonstrate patent eligibility.” *FairWarning*, 839  
26 F.3d at 1098 (internal quotation marks and citation omitted).

### III. DISCUSSION

The question presented by Defendant's Motion to Dismiss is whether the claims of the Asserted Patents fall within the patent-ineligible "abstract ideas" exception to Section 101. To answer this question, the Court turns to the application of the *Alice* framework described above to the claims of the Score and Platform Patents.

#### A. Scope of Analysis and Representative Claims

Before turning to the substance of the parties' eligibility arguments, the Court clarifies the scope of the claims to be assessed. Today the parties filed a joint status report stating that Plaintiff is asserting the following claims in the Score and Platform Patents: claims 1-4, 6-7, and 10-12 of the '021 patent; claims 1-5, 13-14, 16-17, and 19-23 of the '376 patent, claims 1-6, 9, 10, 13, and 22 of the '465 patent, claims 1-3 and 5-12 of the '962 patent, and claims 1, 3-5, and 8-9 of the '833 patent. ECF No. 55.

Nevertheless, the Court need not individually analyze every claim, if certain claims are representative. *See generally Alice*, 134 S. Ct. at 2359-60 (finding 208 claims to be patent-ineligible based on analysis of one representative claim). Often, parties will agree that certain claims are representative for the purposes of a § 101 analysis. *See, e.g., Synopsys*, 839 F.3d at 1147 (parties agreed that certain claims were representative); *Intellectual Ventures*, 838 F.3d at 1313 (parties agreed that certain claims were representative). However, when they do not, a district court may make this determination on its own. *Content Extraction*, 776 F.3d at 1348 ("The district court . . . correctly determined that addressing each claim of the asserted patents was unnecessary. *After conducting its own analysis*, the district court determined that [certain claims] are representative . . .") (emphasis added).<sup>2</sup>

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<sup>2</sup> The district court may do this even when one party asserts that certain claims are not representative. In *Content Extraction*, the plaintiff urged the district court to deny defendant's § 101 motion because the defendant did not individually address the patentability of every claim. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, No. 12-2501 MAS TJB, 2013 WL 3964909, at \*5 (D.N.J. July 31, 2013), *aff'd*, 776 F.3d 1343 (Fed. Cir. 2014). Nevertheless, the Federal Circuit upheld the district court's determination, "[a]fter conducting its own analysis," that the claims were representative. *Content Extraction*, 776 F.3d at 1348. The Federal Circuit also noted that the plaintiff could have challenged the defendant's characterization of certain claims as representative, but did not, effectively waiving this argument. *See id.* ("If



Here, the parties dispute whether representative claims can guide the Court’s analysis, and who bears the burden of showing that certain claims are representative. *Compare* Mot. at 3, Reply at 2, *with* Opp’n at 5. The Court need not delve into these arguments at least for the Score Patents and Platform Patents because, for the reasons discussed below, the Court can address all the claims of these patents. It will do so by first assessing the patentability of the allegedly representative claim, and then using that as a basis for analyzing the remaining claims.

### **B. Score Patents**

The Court now turns to the Score Patents (the ’926 and ’833 patents) and determines whether the claims of these patents are patent-ineligible under § 101. The Court begins with claim 1 of the ’926 patent, the only claim for which either party has provided substantial briefing, and then turns to the remaining claims.

#### **1. *Alice* Step One for Claim 1 of the ’926 Patent—Whether the Claim is Directed to an Abstract Idea**

Step one of the *Alice* framework directs the Court to assess “whether the claims at issue are directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. Here, Defendant contends that claim 1 of the ’926 patent is directed to the idea of “detecting fraudulent account activity among accounts on a telecommunications platform.” Mot. at 5. According to Defendant, this is an abstract idea because it is a conventional business practice that humans have long performed, and which falls within the realm of claims that other courts have invalidated under § 101. *Id.* at 6.

Plaintiff disagrees, and argues that claim 1 of the ’926 patent is not abstract under the Federal Circuit’s decisions in *Enfish* and *McRO*. As discussed above, these cases held that claims directed to an “improvement to computer functionality” are not abstract. *Enfish*, 822 F.3d at 1335; *McRO*, 837 F.3d at 1314. In its opposition, Plaintiff argues that claim 1 follows this precedent because claim 1 is directed to solving the modern technological problem of “detecting fraud on [a] multiple-account platform” with a specific technical solution: fraud scores and rules based on

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CET disagreed with PNC’s or the district court’s assessment, CET could have identified claims in its opposition brief that it believed would not be fairly represented by claims 1 of the ’855 and ’416 patents for purposes of PNC’s § 101 challenge.”).

“usage data pattern conditions between two accounts.” Opp’n at 18. Because of this, Plaintiff argues, claim 1 is directed to a specific improvement to computer technology and not an abstract idea under step one. *Id.* at 18-19.

The step one inquiry “applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish*, 822 F.3d at 1335. Thus, the Court conducts its step one inquiry by first identifying what the “character as a whole” of claim 1 of the ’926 patent is “directed to,” and then discussing whether this is an abstract idea.

**a. Claim 1 of ’926 Patent—“Directed to” Inquiry**

The Court begins by examining claim 1 of the ’926 patent in its entirety to understand what its “character as a whole” is “directed to.” *Elec. Power*, 830 F.3d at 1353 (“[W]e have described the first-stage inquiry as looking at the ‘focus’ of the claims, their ‘character as a whole . . . .’”); *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013) (“[T]he court must first identify and define whatever fundamental concept appears wrapped up in the claim.”) (quotation marks omitted). In distilling the purpose of a claim, the Court is careful not to express the claim’s fundamental concept at an unduly “high level of abstraction . . . untethered from the language of the claims,” but rather at a level consonant with the level of generality or abstraction expressed in the claims themselves. *Enfish*, 822 F.3d at 1337; *see also Thales Visionix*, 2017 WL 914618, at \*3 (“We must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.”).

Claim 1 recites only two components: (1) a “telecommunications platform,” on which a “plurality of accounts” is enrolled, and (2) a “fraud detection system of [that] telecommunications platform.” ’962 patent at col. 14:6-8. The bulk of the claim, then, devotes itself to four steps that occur as part of the “fraud detection system:” (1) “receiving account usage data” of certain types; (2) “calculating fraud scores of a set of fraud rules from the usage data” that spans two or more accounts; (3) “detecting” when the “fraud scores” satisfy a “fraud threshold;” and (4) “initiating an

action response.” *Id.* at col. 14:8-20. At a high level, this first step recites a form of data collection, the second two steps recite a form of data analysis, and the final step recites a form of acting upon the results of that analysis.

Assessing the entirety of claim 1 of the ’926 patent for its character as a whole, the Court finds that claim 1 is “directed to” collecting and analyzing usage data across two or more accounts to detect fraud and taking action when fraud is detected. As discussed above, the bulk of the claim is directed to these functions, conducted for the purpose of detecting fraud across multiple accounts. By contrast, other elements of the claim are secondary, as they describe set-up operations<sup>3</sup> or elaborate on the types of data used for fraud detection<sup>4</sup>. Compare, e.g., *Intellectual Ventures*, 838 F.3d at 1313 (excluding claim elements related to setup, such as “receiving . . . file content identifiers” and “creating file content IDs,” for claims directed to “filtering e-mails that have unwanted content”); *FairWarning*, 839 F.3d at 1094 (excluding data types from its statement of what the claims were “directed to”); *Elec. Power*, 830 F.3d at 1353 (same). In addition, this formulation is commensurate with how the Federal Circuit has characterized the “character as a whole” of other data-related claims. See, e.g., *FairWarning*, 839 F.3d at 1094 (claims related to analyzing log data for fraud were “directed to” “collecting and analyzing information to detect misuse and notifying a user when misuse is detected”); *Elec. Power*, 830 F.3d at 1353 (claims relating to analyzing electric grid data were “directed to” “collecting information, analyzing it, and displaying certain results of the collection and analysis”). Thus, “collecting and analyzing usage data across two or more accounts to detect fraud and taking action when fraud is detected” meaningfully captures the “character as a whole” of claim 1.

#### **b. Claim 1 of the ’926 Patent—Abstract Idea Analysis**

<sup>3</sup> Specifically, the step of “enrolling a plurality of accounts . . .” describes set-up operations, which merely set forth the platform upon which the rest of the method operates. ’926 patent at col. 14:5-7.

<sup>4</sup> Specifically, the step of “at a fraud detection system . . . receiving account usage data . . .” states that the usage data “includes at least communication configuration data and billing configuration data” as well as “communication history.” ’926 patent at col. 14:8-13. This merely provides examples of what the “usage data” is. The focus of the claim, however, remains on how usage data is used for fraud detection.

Having determined the “character as a whole” of claim 1 of the ’926 patent, the question becomes whether this is an abstract idea. *Enfish*, 822 F.3d at 1335 (directing the Court to “appl[y] a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’”).

As discussed above, courts will generally begin this inquiry by “compar[ing] claims at issue to those claims already found to be directed to an abstract idea in previous cases.” *Enfish*, 822 F.3d at 1334. This analysis alone can be “sufficient.” *Id*; see, e.g., *Alice*, 134 S. Ct. at 2356 (concluding that the claims were directed to an abstract idea because “[i]t is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here”). Here, Defendant contends that the Federal Circuit’s decision in *FairWarning* is particularly instructive on these facts. The Court agrees.

In *FairWarning*, the Federal Circuit analyzed patents involving substantially similar subject matter to the Score Patents: “detect[ing] fraud and misuse by identifying unusual patterns in users’ access of sensitive data.” *FairWarning*, 839 F.3d at 1092. More specifically, the claimed systems and methods “record[ed] [audit log data concerning user access of digitally stored protected health information], analyze[d] it against a rule, and provide[d] a notification if the analysis detect[ed] misuse.”<sup>5</sup> *Id*. In determining whether the claims were directed to an abstract

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<sup>5</sup> Representative claim 1 of U.S. Patent No. 8,578,500 recited:

1. A method of detecting improper access of a patient's protected health information (PHI) in a computer environment, the method comprising:

generating a rule for monitoring audit log data representing at least one of transactions or activities that are executed in the computer environment, which are associated with the patient's PHI, the rule comprising at least one criterion related to accesses in excess of a specific volume, accesses during a pre-determined time interval, accesses by a specific user, that is indicative of improper access of the patient's PHI by an authorized user wherein the improper access is an indication of potential snooping or identity theft of the patient's PHI, the authorized user having a pre-defined role comprising authorized computer access to the patient's PHI;

applying the rule to the audit log data to determine if an event has occurred, the event occurring if the at least one criterion has been met;

idea, the Federal Circuit first stated that:

We have explained that the “realm of abstract ideas” includes “collecting information, including when limited to particular content.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (collecting cases). We have also “treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Id.* And we have found that “merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.” *Id.*

*Id.* at 1093-94. Applying these principles, the court found that the claims were directed to an abstract idea because they were “directed to a combination of these abstract-idea categories. Specifically, the claims here are directed to collecting and analyzing information to detect misuse and notifying a user when misuse is detected.” *Id.* at 1094.

Claim 1 of the ’926 patent is nearly identical in character to the claims at issue in *FairWarning*. Both relate to the detection of unwanted activities: improper access to patient’s health information in *FairWarning* and telephone fraud in claim 1 of the instant ’926 patent. Both detect unwanted activities through usage data. Both recite the general steps of (1) receiving data to analyze, (2) applying a rule to the data to detect if the unwanted activity has occurred, and (3) taking action. The only difference is that, with respect to the step of detecting if the unwanted activity has occurred, claim 1 of the ’926 patent does in two steps what the *FairWarning* claims did in one. In claim 1 of the ’926 patent, the fraud rule triggers a fraud score, and then the fraud score is compared to a threshold to trigger action. In the *FairWarning* claims, the rule itself triggered action. However, for the purposes of step one of the *Alice* framework, this does not make a difference. Whether completed in one step or two, both claims relate to the same abstract idea: analyzing data. *Elec. Power*, 830 F.3d at 1353 (“[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as

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storing, in a memory, a hit if the event has occurred; and  
providing notification if the event has occurred.

*FairWarning*, 839 F.3d at 1092 (quoting U.S. Patent No. 8,578,500 at col. 16:27-46).

essentially mental processes within the abstract-idea category.”). Thus, just as the Federal Circuit found in *FairWarning*, claim 1 of the ’926 patent is directed to an abstract idea because it is “directed to a combination of the[] abstract-idea categories [of collecting information, analyzing information, and presenting the results of the analysis].”

As discussed above, comparison to prior precedent can be “sufficient” to determine whether a concept is an “abstract idea.” *Enfish*, 822 F.3d at 1334 (noting that “both this court and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases”); *see, e.g., Alice*, 134 S. Ct. at 2356 (finding it “enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here” to conclude that intermediated settlement was an abstract idea). As discussed above, *FairWarning* addressed what claim 1 of the ’926 patent is “directed to.” Thus, pursuant to *FairWarning*, claim 1 is directed to an abstract idea.

Plaintiff nevertheless contends that claim 1 is not directed to an abstract idea because it is instead directed to an “improvement in computer functionality” under *Enfish* and *McRO*. Opp’n at 18-19. Specifically, Plaintiff argues that claim 1 solves the modern technological problem of “detecting fraud on [a] multiple-account platform” with a specific technical solution: fraud scores and rules based on “usage data pattern conditions between two accounts.” *Id.*

This same argument was rejected by the Federal Circuit in *FairWarning*. There, the Federal Circuit considered whether the claims were directed to an “improvement in computer functionality” and concluded they were not. The Federal Circuit concluded that the *FairWarning* claims merely use a computer as a tool to implement the abstract ideas. *FairWarning*, 839 F.3d at 1095. The Federal Circuit observed that “[w]hile the claimed system and method certainly purport to accelerate the process of analyzing audit log data, the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself.” *Id.* (citation omitted).

The same can be said of claim 1 of the ’926 patent. As discussed above, claim 1 of the



'926 patent is directed to collecting and analyzing usage data across two or more accounts to detect fraud and taking action when fraud is detected. Nothing about this abstract idea improves the functioning of a computer itself. Rather, at most, it contemplates using a computer as a tool for implementing this idea. While the use of a computer could make the calculation of fraud scores and detection of fraud scores that meet fraud thresholds more efficient, this does not mean that claim 1 provides a specific improvement to existing technology.

It is also no answer that, as Plaintiff contends, claim 1 solves the “problem of detecting fraud on multiple-account platforms.” Opp’n at 18. Even if this were true, this would not make claim 1 an improvement to an existing technology itself, such as the database technology at issue in *Enfish* or the computer animation technology at issue in *McRO*. See *Enfish*, 822 F.3d at 1335-36 (claims directed to a specific type of self-referential table in a computer database were not abstract because they focused “on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database)”; *McRO*, 837 F.3d at 1314 (claims directed to automating part of a preexisting method for 3-D facial expression animation were not abstract because they “focused on a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type.”). Dealing with fraud across multiple accounts is not an issue that was created by new technology, but something that existed before computers became prevalent. The '926 patent simply uses existing technology to implement methods to deal with telephony fraud across multiple accounts, and does not improve the technology for doing so. Thus, *Enfish* and *McRO* are distinguishable.

In sum, the Court finds that claim 1 of the '962 patent is directed to an abstract idea under the Federal Circuit precedent of *FairWarning*. Plaintiff’s arguments to the contrary are analogous to those that have already been considered and rejected by the Federal Circuit. Thus, they are unpersuasive.

## **2. Alice Step One for Remaining Claims—Whether the Claims are Directed to an Abstract Idea**

Having determined that claim 1 of the '962 patent is directed to an abstract idea, the Court

turns to the remaining claims of the Score Patents to determine whether they too are directed to abstract ideas. The Court begins with the remaining claims of the '962 patent, claims 2 through 12, and then addresses claim 5 of the '833 patent, the exemplary claim identified in Plaintiff's complaint for the '833 patent, and finally addresses the remaining claims of the '833 patent.

**a. Claims 2-12 of the '962 Patent**

The remaining claims of the '962 patent, claims 2-12, all depend on claim 1. The additional limitations of claims 2-11 add minor restrictions on certain elements of claim 1, such as types of data analyzed<sup>6</sup>, types of fraud rules used<sup>7</sup>, or types of responsive actions taken<sup>8</sup>. *See* '962 patent at col. 14:21-29. These limitations simply limit the environment in which the method of claim 1 is applied, but do not perceptibly change the "character as a whole" of their respective claim. *Cf. Bilski*, 561 U.S. at 612 (explaining that "limiting an abstract idea to one field of use or adding token postsolution components [does] not make the concept patentable"); *Ultramercial*, 772 F.3d at 716 (stating that attempts "to limit the use of the abstract idea to a particular technological environment" are insufficient to render an abstract idea patent eligible) (quotation marks omitted). Thus, claims 2-11 have the same "character as a whole" as claim 1 and are also directed to an abstract idea (i.e., collecting and analyzing usage data across two or more

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<sup>6</sup> In particular, claims 2 and 3 restrict the data analyzed to at least include the configuration of the communication systems and applications being used. '926 patent at col. 14:21-27. Claim 4 restricts the data analyzed to at least include media resource usage. *Id.* at 14:28-32. Claims 5 and 6 restrict the data analyzed to at least include billing information. *Id.* at 14:33-38. Claims 7, 8, and 11 restrict the data analyzed to at least include usage information. *Id.* at 14:39-46, 14:55-57.

<sup>7</sup> In particular, claim 2 restricts the fraud rules to include at least one fraud rule relating to the configuration of the communication systems being used, and claim 3 further restricts that configuration to the format of an API string. '926 patent at col. 14:21-27. Claim 4 restricts the fraud rules to include at least one fraud rule relating to patterns of media resource usage between two accounts in the communication history. *Id.* at 14:28-32. Claim 5 restricts the fraud rules to include at least one fraud rule relating to shared billing information across three or more accounts, and claim 6 further restricts this billing information to a shared credit card or billing address. *Id.* at 14:33-38. Claim 7 restricts the fraud rules to include at least one usage pattern condition and using cumulative scoring, and claim 8 further restricts these rules to including a usage data time window and an account age condition. *Id.* at 14:39-46. Claim 9 restricts the fraud rules to include at least one fraud rule that is automatically generated. *Id.* at 14:47-49. Claim 11 restricts the fraud rules to include a second set of rules that include usage data conditions within an account. *Id.* at 14:55-57.

<sup>8</sup> In particular, claim 10 restricts the responsive actions to flagging an account and providing an interface for an analyst. '926 patent at 14:50-54.



accounts to detect fraud and taking action when fraud is detected).

Dependent claim 12, however, introduces the element of “sub-accounts.” *Id.* at 14:59. This alters the character of the operations recited in the steps of claim 1 (i.e., data collection, analysis, and taking action). Thus, claim 12 does not have the same “character as a whole” as claim 1. Nevertheless, claim 12 is still directed to an abstract idea. As discussed below, the claims of the ’833 patent introduce the element of “sub-accounts,” but they are still directed to an abstract idea. Thus, for the same reasons as discussed below with respect to the claims of the ’833 patent, the introduction of sub-accounts does not make a claim not abstract. Thus, claim 12 is also directed to an abstract idea.

#### **b. Claim 5 of the ’833 Patent**

The Court now turns to the ’833 patent and begins with claim 5, the exemplary claim identified in Plaintiff’s complaint. Compl. ¶ 91. Defendant contends that claim 5 of the ’833 patent recites “common steps” to claim 1 of the ’926 patent, and that the “main difference is that the claims of the ’833 patent recite in greater detail the conventional notion of parent/child accounts (or sub-accounts).” Mot. at 5 n.21. Plaintiff argues that these differences cannot be so easily dismissed. Opp’n at 19. Instead, according to Plaintiff, the “additional and distinct limitations [in claim 5] evidence ties to a different technical problem in dealing with illicit activity within sub-accounts of a parent.” *Id.*

The Court agrees with Plaintiff that the use of “sub-accounts” in claim 5 of the ’833 patent is a palpable difference. Nevertheless, this difference does not alter the Court’s conclusion under step one of the *Alice* framework. An abbreviated analysis under step one of the *Alice* framework confirms this point:

First, the Court identifies what claim 5 is “directed to.” Claim 5 recites only two components: (1) a “telecommunications platform,” on which a “plurality of accounts” is enrolled, and (2) a “fraud detection system of [that] telecommunications platform.” ’833 patent at col. 15:10-16:4. The remainder of the claim, then, devotes itself to four steps that occur as part of the “fraud detection system.” (1) “receiving account usage data” of certain types from different sub-

1 accounts; (2) “calculating fraud scores of a set of fraud rules from the usage data” of the sub-  
2 accounts; (3) “detecting” when the “fraud scores” satisfy a “fraud threshold,” indicating the  
3 existence of certain types of illicit behavior; and (4) notifying a parent account of the illicit  
4 behavior. *Id.* at col. 15:10-16:4. At a high level, this first step recites a form of data collection,  
5 the second two steps recite a form of data analysis, and the final step recites a form of acting upon  
6 the results of that analysis. All of these steps serve a single purpose: fraud detection across sub-  
7 accounts.

8 Assessing the entirety of claim 5 for its character as a whole, the Court finds that claim 5 is  
9 “directed to” collecting and analyzing usage data across sub-accounts to detect illicit behavior and  
10 notifying a parent when illicit behavior is detected. *See id.* As discussed above, claim 1 of the  
11 ’962 patent is directed to collecting and analyzing usage data across two or more accounts to  
12 detect fraud and taking action when fraud is detected. Thus, the Court’s “directed to” statement  
13 for claim 5 of the ’833 patent mirrors that of claim 1 of the ’926 patent, but adjusts for the “sub-  
14 accounts” claim element. The statements are similar, but not exactly the same.

15 The question then becomes whether what claim 5 is “directed to” constitutes an abstract  
16 idea. Evaluating this in the context of the Court’s claim 1 analysis, the Court finds that its analysis  
17 does not substantially change. Claim 5’s “character as a whole” is just as similar to the character  
18 of the claims in *FairWarning*, and claim 5 is not directed to an improvement in computer  
19 technology. Thus, for the same reasons given for claim 1 of the ’926 patent, claim 5 of the ’833  
20 patent is also directed to an abstract idea.

21 **c. Claims 1-4, 6-9 of the ’833 Patent**

22 The Court next turns to the remaining claims in the ’833 patent. Claims 1, 3, and 4 of the  
23 ’833 patent are independent claims that are substantially similar to claim 5 of the ’833 patent.  
24 They claim the same basic framework of enrolling accounts, receiving usage data, calculating  
25 fraud scores, detecting when a threshold is reached, and taking action, and differ primarily in the  
26 type of data analyzed. *Compare* ’833 patent at col. 13:66-14:23, 14:29-15:9, *with* col. 15:10-16:4.  
27 Thus, their “character as a whole” is the same as claim 5, and they are directed to an abstract idea

1 for the same reasons.

2 Claim 2 depends on claim 1 and adds additional details about how relevant data (media  
3 files) are compared across sub-accounts. '833 patent at col. 14:23-28. Claims 6-9 depend on  
4 claim 5 and add restrictions on the type of data compared.<sup>9</sup> Despite these limitations, the focus of  
5 these claims is the same as claim 5's (i.e., collecting and analyzing usage data across sub-accounts  
6 to detect illicit behavior and notifying a parent when illicit behavior is detected). Thus, for the  
7 same reasons that claims 1 and 5 are directed to abstract ideas, claims 2 and 6-9 are as well.

### 8 **3. *Alice* Step Two for Claim 1 of the '962 Patent—Evaluation of Abstract Claims for** 9 **an Inventive Concept**

10 Having found that the claims of the Score Patents are directed to an abstract idea under  
11 step one of *Alice*, the Court proceeds to step two. Here too the Court begins its analysis with  
12 claim 1 of the '962 patent. At step two, the Court must “consider the elements of each claim both  
13 individually and ‘as an ordered combination’ to determine whether the additional elements  
14 ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355  
15 (quoting *Mayo*, 132 S. Ct. at 1298, 1297). The United States Supreme Court has described this as  
16 a “search for an ‘inventive concept’—i.e., an element or combination of elements that is  
17 ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon  
18 the [ineligible concept] itself.’” *Id.*

19 Here, Defendant argues that claim 1 does not recite an inventive concept because none of  
20 its steps “recite[s] a new computer or computing device, just conventional steps.” Mot. at 6.  
21 Specifically, with respect to the “enrolling” step (limitation 1(a) of the '962 patent), Defendant  
22 argues that the “telecommunications platform” contains only generic hardware and conventional  
23 components such as different types of databases. *Id.* at 7. With respect to the “receiving” step  
24 (limitation 1(b) of the '962 patent), Defendant argues that the data is generic and that a telephone

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26 <sup>9</sup> In particular, claim 6 restricts data to application media configuration, and claim 7 further  
27 restricts how media files are determined to be identical. '833 patent at col. 16:5-17. Claim 8  
28 restricts data to application URIs mapped to communication endpoints. *Id.* at col. 16:18-24.  
Claim 9 restricts data to payment mechanism configuration. *Id.* at col. 16:25-28.

company's collection of account usage information is a long-standing conventional business practice. *Id.* at 7-8. With respect to the "calculating" and "detecting fraud" steps (limitations 1(c)-(d) of the '962 patent), Defendant argues that these steps are conventional and generic. *Id.* at 8-9. With respect to the "initiating an action" step (limitation 1(e) of the '962 patent), Defendant argues that this recites only conventional steps. *Id.* at 9. Defendant also argues that the ordered combination of elements does not provide an inventive concept. *Id.* Defendant emphasizes that nothing in the claims specifies "how to solve the alleged problem" or "limits the performance of the recited functions to specialized, non-conventional devices." *Id.*

Plaintiff does not rebut Defendant's arguments with respect to each individual step of claim 1. *Id.* at 20-22. Plaintiff also does not identify any individual claim element that provides an inventive concept. *Id.* Instead, Plaintiff rests its rebuttal on the ordered combination of claim elements, and argues that "[t]he combination of claim elements shows the specific improvement achieved by the invention: using data from multiple accounts and usage data pattern conditions between multiple accounts to control fraud on a system with multiple accounts." *Id.* at 21. According to Plaintiff, claim 1 lists the types of data consulted and defines "a specific use of data and conditions unique to a multi-account platform to monitor fraud." *Id.* Taken together, Plaintiff argues, this recites "a specific discrete implementation of fraud detection—one account or a platform with multiple accounts" which "passes the 'inventive concept' test." *Id.* at 21.

Ordinarily, in assessing whether a claim recites an inventive concept, the Court, under *Alice*, must consider its elements "both individually and 'as an ordered combination.'" *Alice*, 134 S. Ct. at 2355. Here, however, because Plaintiff has not identified any individual elements which it contends supply an inventive concept, the Court need not consider the claim elements individually. *Shakur v. Schriro*, 514 F.3d 878, 892 (9th Cir. 2008) (litigants waive arguments by failing to raise them in an opposition to a motion to dismiss); accord *John–Charles v. California*, 646 F.3d 1243, 1247 n.4 (9th Cir. 2011) (holding party "failed to develop any argument on this front, and thus has waived it"); see also *U.S. v. George*, 291 F. App'x. 803, 805 (9th Cir. 2008) (holding party's "failure to adequately develop these arguments in his brief operates as a waiver").

1 Thus, the Court will only address the elements' ordered combination.

2 Turning to the ordered combination of elements of claim 1, Plaintiff identifies "using data  
3 from multiple accounts and usage data pattern conditions between multiple accounts to control  
4 fraud on a system with multiple accounts" as an inventive concept that renders the '962 patent  
5 patentable. *Id.* at 21. The Court disagrees. Plaintiff's argument is based on two Federal Circuit  
6 cases: *BASCOM* and *DDR*. The Court addresses each in turn.

7 Turning first to *BASCOM*, the Federal Circuit there found that "an inventive concept can  
8 be found in the non-conventional and non-generic arrangement of known, conventional pieces."  
9 *BASCOM*, 827 F.3d at 1350. In that case, the Federal Circuit addressed a claim for a particular  
10 type of internet content filtering. *Id.* The Federal Circuit noted that internet content filtering was  
11 a generic concept that had faced a number of technological issues. *Id.* Specifically, in one type of  
12 content filtering, the program would be executed on end-user computers. *Id.* While this  
13 configuration allowed customizability of the filters for each end user, the execution on the end-  
14 user's computer meant that tech-savvy individuals could bypass the filters. *Id.* In contrast, other  
15 types of content filtering had the internet service provider implement the filtering. This prevented  
16 tampering, but would not allow customizable filtering settings for each end-user. *Id.* The  
17 invention in *BASCOM* combined the benefits of each of these filtering methods by "install[ing] a  
18 filtering tool at a specific location, remote from the end-users, with customizable filtering features  
19 specific to each end user." *Id.* To do so, it "harness[ed] [a] technical feature of network  
20 technology": "the ability of at least some ISPs [(internet service providers)] to identify individual  
21 accounts that communicate with the ISP server, and to associate a request for Internet content with  
22 a specific individual account." *Id.* By combining this technical feature with content filtering, it  
23 claimed a specific, "technology-based solution" that "overc[ame] preexisting problems with other  
24 Internet filtering systems." *Id.* at 1352. Thus, even though the filtering of internet content was a  
25 generic abstract idea, this "non-conventional and non-generic arrangement of known, conventional  
26 pieces" constituted an inventive concept. *Id.* at 1350.

27 Here, the Court finds that the ordered combination of elements in claim 1 is not a "non-

conventional and non-generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1350. Instead, claim 1 specifies steps at a high level of generality to carry out the abstract idea of collecting and analyzing usage data across two or more accounts to detect fraud and taking action when fraud is detected. The claim language is largely silent as to how these high-level functions are implemented, and there is nothing in the claims or the specification that requires anything other than generic hardware and software, arranged in conventional ways. Indeed, the specification explicitly states that “any suitable” means can be used to implement many of the claim elements, including: the telecommunications platform, ’962 patent at col. 2:62-63; the telephony platform components that provide data for fraud scoring, *id.* at col. 8:2-9; the fraud score, *id.* at col. 9:22-26; the usage data, *id.* at col. 9:55-56, 10:7-8, 10:40-41, 10:59-62; the fraud rule, 13:6-7; and the action taken in response, *id.* at col. 12:29-35. Further, the specification does not provide details about prior or conventional approaches to fraud scoring, so there is also nothing along these lines that would indicate that the arrangement of elements in claim 1 is not conventional or generic. *Compare BASCOM*, 827 F.3d at 1350 (discussing how inventive concept provided a technical improvement over prior art filtering). Thus, the ordered combination of elements in claim 1 does not provide an inventive concept that can be analogized to that of *BASCOM*.

Turning to *DDR*, the Federal Circuit there found an inventive concept in a “claimed solution [that was] necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR*, 773 F.3d at 1257. Specifically, the court analyzed claims that addressed the “Internet-centric problem” of third-party merchant advertisements that would “lure . . . visitor traffic away” from a host website (because clicking on the advertisement would redirect the visitor to the merchant’s website). *Id.* at 1248, 1259. The claims solved this problem by generating composite websites that combined the visual elements of the host’s webpage with the content of the third-party merchant. *Id.* at 1248. The Federal Circuit reasoned that the claims “specify how interactions with the Internet are manipulated to yield a desired result” such that the interactions are “not merely the routine or conventional use of the

Internet.” *Id.* at 1258-59. Accordingly, there was sufficient transformation for the claims to not be patent-ineligible. *Id.* at 1259.

Later Federal Circuit cases have clarified *DDR*. In *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, the Federal Circuit explained that “*DDR Holdings* dealt with a patent that required doing something *to* a web page, not simply doing something *on* a web page, a difference that the court regarded as important to the issue of patent eligibility.” 838 F.3d 1253, 1262 (Fed. Cir. 2016). In *Electric Power*, the Federal Circuit characterized *DDR* as “requir[ing] an arguably inventive device or technique for displaying information.” 830 F.3d at 1355. In *Synopsys*, the Federal Circuit explained that the claims in *DDR* “involved a technological solution that overcame a specific challenge unique to the Internet.” 839 F.3d at 1138.

The ordered combination of elements at issue here is distinguishable from *DDR*. The crux of the inventive concept in *DDR* was that the solution was an improvement to the technology itself. See *DIRECTV*, 838 F.3d at 1262 (“*DDR Holdings* dealt with a patent that required doing something *to* a web page, not simply doing something *on* a web page”); *DDR*, 773 F.3d at 1257 (“claimed solution is necessarily rooted in computer technology”). It did not simply use technology as a tool for solving a problem that was separate from the technology itself. *Id.* The ordered combination of elements in claim 1, by contrast, does precisely this. Taken together, these claim elements solve a problem outside the technical realm: telephone fraud. See ’962 patent at col. 1:15-16. As such, a computer and other generic technologies implicated by the claims are simply used as tools to implement this solution. Nothing about the claims inherently improves computers, telecommunications technology, or any other kind of technology itself. Thus, *DDR* is distinguishable.

Plaintiff nevertheless contends that the ordered combination of elements in claim 1 recites an inventive concept under *DDR* because “[t]he problem of reducing fraudulent activity for multiple-account platforms ‘is a challenge particular to the Internet.’” Opp’n at 21. This is unpersuasive. As an initial matter, “reducing fraudulent activity for multiple-account platforms” is not a problem specific to the Internet. Well before the Internet, telephone companies maintained



1 systems with multiple customer accounts, and fraud was committed on these systems. Moreover,  
2 as discussed above, the mere existence of “a challenge particular to the Internet” is not sufficient  
3 to bring a claim within the purview of *DDR*. This omits a significant portion of the considerations  
4 that animated *DDR*: that the “claimed solution is necessarily rooted in computer technology.”  
5 *DDR*, 773 F.3d at 1248. As discussed above, this is not the case for claim 1, so Plaintiff’s  
6 argument is unpersuasive.

7 Essentially, what appears to animate Plaintiff’s inventive concept argument is the fact that  
8 claim 1 is implemented on a multi-account telecommunications platform. However, this is not  
9 sufficient to take claim 1 out of the realm of the abstract. “[L]imiting the claims to [a] particular  
10 technological environment . . . is, without more, insufficient to transform them into patent-eligible  
11 applications of the abstract idea at their core.” *Elec. Power*, 830 F.3d at 1350. Taking a fraud  
12 prevention solution and applying it to a multi-account environment is precisely this.

13 In sum, the ordered combination of elements in claim 1 neither recite a “non-conventional  
14 and non-generic arrangement of known, conventional pieces,” *BASCOM*, 827 F.3d at 1350, nor  
15 are “necessarily rooted in computer technology in order to overcome a problem specifically  
16 arising in the realm of computer [technology,” *DDR*, 773 F.3d at 1257. Thus, it fails to recite an  
17 inventive concept. Accordingly, claim 1 fails to recite patent-eligible subject matter under § 101.

18 **4. Alice Step Two for Remaining Score Patents’ Claims—Evaluation of Abstract**  
19 **Claims for an Inventive Concept**

20 Plaintiff has not separately identified an inventive concept for any of the remaining Score  
21 Patents’ claims apart from those already discussed above. Accordingly, for the same reasons  
22 discussed with respect to claim 1 of the ’926 patent, the remaining Score Patents’ claims also fail  
23 to recite an inventive concept. Thus, they also do not recite patent-eligible subject matter under §  
24 101.

25 For the foregoing reasons, the Court finds that all of the claims in the Score Patents fail to  
26 recite patentable subject matter. Accordingly, the Court GRANTS Defendant’s Motion to Dismiss  
27 Plaintiff’s claims for patent infringement as to the Score Patents.



### C. Platform Patents

The Court now turns to the Platform Patents (the '021, '465, and '376 patents) and determines whether the claims of these patents are patent-ineligible under § 101. The Court begins with claim 13 of the '021 patent, the only claim for which either party has provided substantial briefing, and then turns to the remaining claims.

#### 1. *Alice* Step One for Claim 13 of the '021 Patent—Whether the Claim is Directed to an Abstract Idea

As set forth above, step one of the *Alice* framework directs the Court to assess “whether the claims at issue are directed to [an abstract idea].” *Alice*, 134 S. Ct. at 2355. Here, Defendant contends that the claims of the Platform Patents are directed to the abstract idea of “initiating and controlling a message (e.g., voice, text, etc.) based on a request.” Mot. at 14. Defendant derives this from the claim language, and also asserts that Plaintiff “admits” this in the complaint. *Id.* (quoting Compl. ¶ 36). Defendant argues that this concept is similar to other abstract ideas identified in other cases, such as “retaining information in the navigation of online forms,” “authenticating a user based on a user’s message,” and “connecting two people via long distance telephony using caller ID and call forwarding.” *Id.* at 15.

Plaintiff does not propose an alternative statement of what claim 13 is “directed to.” Instead, Plaintiff argues that claim 13 is patent-eligible because it recites a specific solution to the problem of modern applications not working well with older, complex telephony network systems. Opp’n at 13-14. In particular, Plaintiff argues that claim 13’s unique combination of embedded state information, URI, and API resources bridges the gap between the modern application and the older telephony network. *Id.* According to Plaintiff, this constitutes a specific technical solution to a technical problem arising in computer networks. *Id.*

To evaluate step one, the Federal Circuit instructs the Court to “appl[y] a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish*, 822 F.3d at 1335. Thus, the Court first identifies what the “character as a whole” of claim 13 of the '021 patent is “directed to,” and then discusses whether this is an abstract idea.

**a. Character of the Claims**

The Court begins by examining claim 13 of the '021 patent in its entirety to understand what its “character as a whole” is “directed to.” *Enfish*, 822 F.3d at 1335.

Claim 13 is complex, so, before assessing its character as a whole, the Court first describes the claim. Claim 13 recites a method that involves nine steps, which are a combination of the components in the system and the operations they perform. These steps are best understood in light of the specification. As discussed above, the specification describes how the call router sits in between a traditional communication network (e.g., a telephone network) and a modern application server (e.g., a server running software that supplies logic for a customer hotline) and translates between the two. *See* '021 patent at col. 6:49-8:5, 13:12-14:14. This happens through two primary features: (1) telephony session translating (i.e., translating and forwarding telephone signals to the application server, and receiving and executing responsive actions), *see generally id.* at col. 2:50-8:5, 12:65-15:47; and (2) the call router application programming interface (“API”) resources,<sup>10</sup> *see generally id.* at col. 8:6-12:64.

Reading claim 13 in this context, the method distills to a recitation of the above two features. First, step 13(a) provides background information about the application server: it communicates with an “application layer protocol” (e.g., HTTP). *Id.* at col. 19:20-21. Next, steps 13(b) and 13(c) recite the functionality that the call router provides in each feature. In the first, the call router “process[es] telephony instructions” (received from the application server)—step 13(b). *Id.* at col. 19:22. In the second, the call router “creat[es] call router resources accessible through a call router Application Programming Interface (API)”—step 13(c). *Id.* at 19:23-27; *see id.* at col. 19:23-24. The next set of steps describe, for each of the two features, the set of interactions that happen between the call router and the application server. Steps 13(d)-(g) relate to the first feature

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<sup>10</sup> As described above, call router API resources are web-accessible data elements, which the application server can use to access and modify state information about the telephony session that is stored by the call router. '021 patent at col. 8:52-54, 9:33-40; *see generally id.* at col. 8:7-12:64. For example, the application server can direct the call router to modify data about the number from which a call was initiated, *id.* at col. 10:1-4, or change the state of a current call (e.g., hanging up a current call, transferring a current call, or initiating recording of a current call), *id.* at col. 10:42-53.

(telephony session translating). When a new telephony session is created (e.g., a phone call is placed), the call router maps that telephony session to the URI of the corresponding application server, so that it knows which telephone signal should be forwarded to which application server—step 13(d). *Id.* at col. 19:28-29; *see id.* at col. 3:54-4:10. Next, the call router “send[s] a request to the application server,” which contains “embed[ded] state information of the telephony session”—steps 13(e)-(f). *Id.* at col. 19:30-32; *see id.* at col. 4:31-5:46. In return, the application server sends “a response comprising telephony instructions for sequential processing”—step 13(g). *Id.* at col. 19:33-34; *see id.* at 6:38-47. (Then, as mentioned above, the call router “process[es] [those] telephony instructions”—step 13(b). *Id.* at col. 19:22; *see id.* at col. 6:49-8:5.) Steps 13(h)-(i) relate to the second feature (API resources). First, the application server sends “an API request . . . for interaction with a resource”—step 13(h). *Id.* at col. 19:35-36; *see id.* at col. 8:52-9:9. In return, the call router sends a response to the “API request based on the interaction with a resource”—step 13(i). *Id.* at col. 20:1-2; *see id.* at col. 9:10-32.

Thus, claim 13, essentially, recites a method which (1) translates telephony sessions (and specifically, by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them), and (2) provides API resources through which the application server can access information maintained by the call router. Both serve a single purpose: allowing a modern application server—which runs software and communicates using a higher-level, application layer protocol like HTTP—to communicate with and perform actions upon a traditional telephony session—which consists of transmissions of lower-level signals, such as telephone signals. Stated more succinctly, they enable a modern application server to process a traditional telephony session.

With this understanding, the Court finds that, reading the entirety of claim 13 for its character as a whole, claim 13 is “directed to” enabling a modern application server to process traditional telephony sessions through (1) translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for

1 telephony processing instructions, receiving instructions for sequentially processing those  
2 instructions, and processing them), and (2) providing API resources. Although this “directed to”  
3 statement is lengthy, the Court finds that it cannot be simplified further. First, the “application  
4 layer protocol” is significant because it emphasizes the gap that the call router must bridge: it must  
5 translate from a high-level application layer protocol like HTTP to low-level signals like telephone  
6 signals, and vice versa. *See* ’021 patent at col. 6:49-8:5, 13:12-14:14. Second, the particular  
7 features (e.g., embedding state information, processing instructions sequentially, using an API to  
8 access call router resources) through which the invention of claim 13 enables processing by the  
9 application server are significant. They constitute the bulk of the claim language and contribute  
10 substantially to its collective substance. *See* ’021 patent at col. 19:19-20:2; *compare Ultramercial*,  
11 772 F.3d at 715 (identifying the “concept embodied by the *majority* of the limitations” in its step  
12 one analysis) (emphasis added). Indeed, if the Court were to exclude them, the stated “character  
13 as a whole” of the claims would become so generalized that it would cease to describe the claim.  
14 *Compare Enfish*, 822 F.3d at 1337 (cautioning against “describing the claims at such a high level  
15 of abstraction and untethered from the language of the claims”).

16 Defendant nevertheless contends that claim 13 is “directed to” something much more high  
17 level: “initiating and controlling a message (e.g., voice, text, etc.) based on a request.” This is too  
18 simplified. As discussed above, the majority of the claim language devotes itself to the  
19 mechanisms behind this kind of “messag[ing],” and Defendant ignores these entirely. The same  
20 can also be said for the specification, which largely concerns itself with the mechanisms through  
21 which the call router communicates with the application server, *see* ’021 patent at col. 2:50-8:5,  
22 12:65-15:47, and how the call router resources are accessed through the call router API, *see id.* at  
23 col. 8:6-12:64. These descriptions go beyond simply reciting generic goals of, for example,  
24 “initiating” or “controlling” a “message,” and instead describe contours of how such functions are  
25 accomplished. *See, e.g., id.* at col. 13:29-14:14 (describing how the call router communicates with  
26 the application server); *id.* at col. 6:49-8:5 (describing how telephony instructions from the  
27 application server are processed by the call router); *id.* at col. 8:6-12:64 (describing how API

resources are used by the application server). As such, these claim elements cannot be ignored.

For these reasons, the “character as a whole” of claim 13 is “directed to”: enabling a modern application server to process traditional telephony sessions through (1) translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them), and (2) providing API resources.

#### **b. Abstract Idea Analysis**

Having determined the “character as a whole” of claim 13, the Court turns to whether it is directed to an abstract idea. *Enfish*, 822 F.3d at 1335. As discussed above, courts will generally begin by comparing the claims at issue to prior § 101 cases, and then turn to guideposts, including: (1) whether the claims are directed to “improvement to computer functionality;” (2) whether the claims are directed to a “new and useful technique;” (3) whether the claims have an analogy to the brick-and-mortar world; and (4) whether claims are directed to a mental process or a process that can be performed with a pen and paper. *See* Section II.C, *supra*.

For the reasons set forth below, the Court finds that claim 13 is directed to an improvement in computer functionality and not an abstract idea. Accordingly, the Court focuses its analysis on this guidepost and reaches other considerations only as necessary to rebut the parties’ arguments.

#### **i. Improvement in Computer Functionality**

A claim is not abstract if it “improve[s] the functioning of a computer itself.” *Alice*, 134 S. Ct. at 2359. Thus, *Enfish* held that it is “relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.” 822 F.3d at 1335. When considering claims purportedly directed to “an improvement of computer functionality,” the Court must “ask whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Id.* at 1335-36.

In applying *Enfish*, the Federal Circuit has carefully distinguished between claims directed

1 to a disembodied “function”—even if one relating to computer technologies—and claims directed  
 2 to “a particular way of performing that function.” *DIRECTV*, 838 F.3d at 1259. The first is an  
 3 abstract idea, while the other is not. *Id.* The Federal Circuit illustrated this concept in *DIRECTV*,  
 4 where it found that claims directed to “providing out-of-region access to regional broadcast  
 5 content” were directed to an abstract idea because this was a “broad and familiar concept  
 6 concerning information distribution that is untethered to any specific or concrete way of  
 7 implementing it.” *Id.* at 1258. Thus, claims that are “entirely functional in nature” or recite a  
 8 “general concept . . . without offering any technological means of effecting that concept” are not  
 9 comparable to the claims in *Enfish*. *Id.* at 1258, 1262.

10 Applying these principles, the Court finds that claim 13 is directed to a specific  
 11 improvement in a type of computer technology—specifically, telephony session processing  
 12 technology. As the specification of the ’021 patent explains, at the time of invention,  
 13 implementing telephony applications on existing communications networks presented “new  
 14 complexities and challenges.” *Id.* at col. 1:38. In particular, “[d]eploying telephony services  
 15 require[d] knowledge of voice networking and codecs, hardware or services to bridge servers to  
 16 the public phone infrastructure, capital investment in hardware, and ongoing collocation of that  
 17 hardware.” *Id.* at col. 1:39-43. In other words, modern applications (and the developers making  
 18 them) had to interact directly with traditional communication networks. *See id.* This required the  
 19 developers to understand the underlying details of traditional communication networks and  
 20 custom-tailor the application-to-network interactions so the application would be conversant with  
 21 that particular network. *See id.* This burden came on top of other burdens, such as writing the  
 22 actual software for the application, *id.* at col. 1:45-46, and providing “[o]ngoing operation and  
 23 maintenance,” *id.* at col. 1:50-53. Accordingly, what claim 13 is directed to—enabling a modern  
 24 application server to process traditional telephony sessions through (1) translating telephony  
 25 sessions [. . .]<sup>11</sup>, and (2) providing API resources—solved this problem because it allowed modern  
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27 <sup>11</sup> For readability, the Court has abbreviated a portion of its “directed to” formulation here. In full,  
 28 this portion reads: translating telephony sessions (by sending embedded state information about



1 applications to interact with traditional communication networks in a way that mimicked web-  
 2 based programming. *See id.* at col. 2:1-18. This reduced or eliminated the need for the  
 3 application (and its developers) to know the details of traditional communication networks. *See*  
 4 *id.* at col. 2:1-5. Instead, the application could use familiar web-based programming techniques  
 5 and communicate in the same way that it would with a web program, and trust the solution to  
 6 interface with the traditional communication networks. *See id.* at col. 2:1-18. This simplified  
 7 these applications and improved the development process required to make them. *See id.* at col.  
 8 2:18-23. In essence, it improved existing applications for telephony processing and software  
 9 development tools. Collectively, this is an improvement to telephony processing technology itself.

10 Not only is this an improvement to telephony processing technology, it is a specific  
 11 implementation of this improvement. *See DIRECTV*, 838 F.3d at 1258 (holding a patent to be  
 12 abstract because the asserted claims were “entirely functional in nature” and “untethered to any  
 13 specific or concrete way of implementing [that function].”). As discussed above, claim 13 is  
 14 directed to enabling a modern application server to process traditional telephony sessions *through*  
 15 (1) translating telephony sessions (by sending embedded state information about the telephony  
 16 session over an application layer protocol as a request for telephony processing instructions,  
 17 receiving instructions for sequentially processing those instructions, and processing them), and (2)  
 18 providing API resources. These two functions—translating telephony sessions and providing API  
 19 resources—are specific technical implementation details that shift the focus of claim 13 beyond a  
 20 disembodied, functional goal. Specifically, with respect to the first function, claim 13 requires  
 21 that translating the telephony session involves (1) sending embedded state information of the  
 22 telephony session, (2) using an application layer protocol to communicate, (3) receiving  
 23 instructions for sequential processing, and (4) processing those instructions. The specification  
 24 adds further technical contour, as it describes each of these steps in detail. *See, e.g., id.* at col.

25  
 26 \_\_\_\_\_  
 27 the telephony session over an application layer protocol as a request for telephony processing  
 28 instructions, receiving instructions for sequentially processing those instructions, and processing  
 them).



13:29-14:14 (describing how the call router communicates with the application server, including the use of embedded state information and an application layer protocol); *id.* at col. 6:49-8:5 (describing how telephony instructions from the application server are processed by the call router); *id.* at col. 8:6-12:64 (describing how API resources are used by the application server). In addition, the specification underscores that these features are meaningful, as they enable specific capabilities within the system. For example, sending embedded state information enables stateless communications and stateless processing, which means that the application server does not need to store information about ongoing calls itself. *See id.* at col. 13:32-40. As another example, using an application layer protocol to communicate means that the application server can communicate using familiar constructs like HTTP headers, cookies, and operations such as GET, POST, and PUT. *See id.* at col. 13:29-14:14. As such, claim 13’s recitation of this first function, telephony session translating, provides meaningful restrictions on *how* the larger goal of enabling a modern application server to process traditional telephony sessions is accomplished. This shifts the claim’s focus away from a mere disembodied function. Turning to claim 13’s recitation of the second function, providing API resources, the Court finds that the same observations can be made here. As with the first function, claim 13’s statement of this feature constitutes technical implementation detail because it provides a specific way in which the call router is required to provide the telephony session information it stores to the application server. *See id.* at col. 19:35-20:.. The specification provides further clarifying detail, including describing different types of API resources, the operations that can be performed with them, and how this can be implemented using an application layer protocol like HTTP. *See id.* at col. 8:6-12:64. Thus, this second function, providing API resources, is also a specific implementation. Accordingly, taking these two features together, claim 13 is directed to a specific implementation of an improvement to telephony session processing technology.

So stated, claim 13 here parallels those at issue in *Enfish*. In *Enfish*, the Federal Circuit found that the claims at issue were “not simply directed to any form of storing tabular data, but instead [were] specifically directed to a self-referential table for a computer database,” which

“functions differently than conventional database structures.” 822 F.3d at 1337. The same can be said for claim 13. The features of (1) translating telephony sessions [. . .]<sup>12</sup> and (2) providing API resources make it such that the claims are not directed to any form of enabling a modern application server to process traditional telephony sessions, but a specific variant of this function. In addition, this variant works differently than conventional approaches, as it allows the application server to communicate with the traditional communication network using familiar web-based constructs, whereas the conventional approach requires the application server to know and understand the traditional communication network and communicate with it directly. *See id.* at col. 1:39-43, 2:1-18. The same can be said for that application’s developers: the variant allows developers to write modern applications using familiar web-based programming techniques, whereas the conventional approach requires developers to understand the details of traditional communications networks in order to be able to custom-make modern applications that worked specifically with that network. *See id.* at col. 1:39-43, 2:1-18. As such, it qualifies as a “specific asserted improvement in [telephony session processing/telephony application programming] capabilities” instead of “on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish*, 822 F.3d at 1335-36.

Further, claim 13 cannot be deemed to be directed to an abstract idea under *DIRECTV* and similar cases because it is “entirely functional in nature” or “untethered to any specific or concrete way of implementing [that function].” *DIRECTV*, 838 F.3d at 1258. As discussed above, claim 13 is “directed to” a specific implementation of an improvement to telephony session processing technology—specifically, the functions of (1) translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them), and (2) providing API resources. Both features are or

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<sup>12</sup> In full: translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them).

1 include specific technical implementation details that shift the focus of claim 13 beyond a  
 2 disembodied, functional goal. Accordingly, these functions provide what was missing from  
 3 *DIRECTV*: “details regarding the manner in which the invention accomplishes the recited  
 4 functions.” *Id.* at 1259. It is true that these requirements do not eliminate all design choices for a  
 5 person of skill in the art. For example, the specification states that the call router API can be “any  
 6 suitable programming communication interface,” ’021 patent at col. 8:18-20; the state information  
 7 can be “any suitable data,” *id.* at col. 5:34-38; and the communication protocol can be HTTP,  
 8 HTTPS, or “any suitable communication protocol,” *id.* at col. 8:44-46. Nonetheless, they are  
 9 specific enough that they confine implementation to a concrete universe of technical features that  
 10 fall within a certain class. This provides the “how” for “accomplish[ing] the recited functions”  
 11 that was missing from *DIRECTV*. For all the reasons stated above, claim 13 is “directed to an  
 12 improvement to computer functionality [instead of] being directed to an abstract idea.” *Enfish*,  
 13 822 F.3d at 1335.

14 Despite the strong comparison to *Enfish*, Defendant contends that claim 13 is directed to an  
 15 abstract idea under other Federal Circuit case law and also by way of analogy to activities in the  
 16 brick-and-mortar context. The Court discusses each argument in turn.

## 17 **ii. Comparison to Case Law**

18 Turning first to prior case law, Defendant contends that five Federal Circuit and district  
 19 court cases show that claim 13 is directed to an abstract idea: *Internet Patents*, 790 F.3d at 1343;  
 20 *EasyWeb Innovations, LLC v. Twitter, Inc.*, No. 11-CV-4550, 2016 U.S. Dist. LEXIS 42549  
 21 (E.D.N.Y. Mar. 30, 2016); *Stanacard v. Rubard, LLC*, No. 12 Civ. 5176, 2015 U.S. Dist. LEXIS  
 22 157345 (S.D.N.Y. Nov. 18, 2015); *Parus Holdings, Inc. v. Sallie Mae Bank*, 137 F. Supp. 3d 660  
 23 (D. Del. 2015); *Telenit Techs., LLC v. Alteva, Inc.*, No. 2:14-CV-369, 2015 U.S. Dist. LEXIS  
 24 125991 (E.D. Tex. Sept. 21, 2015). Mot. at 15. The Court has reviewed these cases and finds all  
 25 of them distinguishable.

26 First, several of these cases found the claims at issue abstract because they were directed to  
 27 a function itself, and not a specific implementation of that function. *See Internet Patents*, 790

1 F.3d at 1348 (claims directed to “retaining information in the navigation of online forms” were  
2 abstract because they were directed to the “idea itself” and “contained no restriction on how the  
3 result is accomplished”); *Stanacard*, 2015 U.S. Dist. LEXIS 157345, at \*19-20 (claims directed to  
4 “connecting two people via long distance telephony using caller ID and call forwarding” were  
5 abstract because they recited this concept without “recit[ing] a single piece of technology required  
6 to put the invention into practice”). As discussed above, claim 13 of the ’021 patent is directed to  
7 a specific implementation of a function, not just the function itself. Thus, the animating principle  
8 of these cases does not apply here.

9 Second, several of these cases found the claims at issue abstract because they had non-  
10 computer analogs. *See Parus Holdings*, 137 F. Supp. 3d at 672 (claims directed to automated  
11 transcription of phone and internet messages were abstract because the claims had “pre-Internet  
12 analogs,” such as such as an administrative assistant transcribing messages for his boss); *Telenit*  
13 *Techs.*, 2015 U.S. Dist. LEXIS 125991, at \*47 (claims directed to “receiving a data network  
14 request” and “monitoring a status of a call” were abstract because they are “tasks which human  
15 beings, such as telephone operators, have been doing for the past century”). Claim 13 stands as a  
16 contrast to this, because, as discussed above, it is directed to a specific improvement in how a  
17 modern application server processes traditional telephony sessions.

18 Finally, the last of these five cases only implicates a portion of what claim 13 is “directed  
19 to.” In *EasyWeb*, the district court found that claims relating to publishing fax messages,  
20 telephone messages, or emails as webpages were directed to “an abstract idea of authentication.”  
21 *Id.* at \*90. The court found this abstract because “[c]ourts have previously found that patents  
22 involving the transformation and transmission of information in one form or another form  
23 constituted abstract ideas.” *Id.* In so reasoning, it cited the Federal Circuit’s decision in *Content*  
24 *Extraction*, 776 F.3d at 1347, as well as several district court decisions. *Id.* This reasoning is  
25 inapplicable to the present case. Although claim 13 involves an element of translating information  
26 (specifically, translating information from traditional communication networks to modern  
27 applications), this is not its sole focus. The Federal Circuit has cautioned that “[t]he ‘directed to’

inquiry, therefore, cannot simply ask whether the claims *involve* a patent-ineligible concept” because, as *Mayo* observed, “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Enfish*, 822 F.3d at 1335. Defendant’s citation to *EasyWeb* commits precisely this fallacy.

In sum, none of these allegedly similar cases compel the conclusion that claim 13 is directed to an abstract idea. Defendant’s assertion to the contrary is unpersuasive.

### iii. Brick and Mortar

Turning to brick-and-mortar analogs, Defendant argues<sup>13</sup> that claim 13<sup>14</sup> has an analog in the brick-and-mortar context because it “simply purport[s] to carry out long-standing conventional technology (telephony operations such as conducting phone calls or sending text messages) using generic computer components, but via the Internet.” Mot. at 15-16.

Defendant simplifies claim 13 too much. Claim 13 is not merely directed to telephony operations carried out on the internet. Indeed, it does not even recite telephony operations (e.g., phone call or text message) themselves. Instead, it recites telephony *processing*—the logic used to make the phone call or text messaging session interactive. Moreover, as discussed above, claim 13 is directed to something even more discrete than this: enabling a modern application server to process traditional telephony sessions *through* (1) translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them), and (2) providing API resources. As discussed above, this is a specific implementation of an improvement to telephony session processing technology because it provided an improved way for modern application servers to interact with traditional communication networks. Thus, claim 13 cannot be reduced to mere telephony operations carried out on the internet. Defendant’s argument to the contrary is unpersuasive.

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<sup>13</sup> This argument appears in Defendant’s “inventive concept” section, but the Court finds them more appropriate for consideration under step one.

<sup>14</sup> Defendant makes the same argument as to the other claims in the Platform Patents. As stated below, Defendant’s argument is equally unpersuasive as to these claims.

#### iv. Conclusion

In sum, claim 13 is directed to a specific improvement in a type of computer technology—telephony session processing technology—and not an abstract idea. Existing case law does not compel a contrary conclusion, nor is there any analogy to the brick and mortar world that counsels otherwise. Accordingly, claim 13 passes step one of the *Alice* framework and is not patent-ineligible.

#### 2. *Alice* Step One for Other Claims—Whether the Claims are Directed to an Abstract Idea

The Court now turns to the remaining claims of the Platform Patents and determines whether, in light of its conclusion that claim 13 of the '021 patent is not directed to an abstract idea, these remaining claims are also not directed to an abstract idea. The Court first addresses claims 14 through 20 of the '021 patent, then addresses claims 1 through 12 of the '021 patent, then addresses the '376 patent, and finally addresses the '465 patent.

##### a. Claims 14-20 of the '021 Patent

Claims 14-20 of the '021 patent depend upon claim 13. The additional limitations of claims 14-20 add minor restrictions on certain elements of claim 13, such as the types of “resources” available through the API<sup>15</sup> or the use cases in which the method is applied<sup>16</sup>. Thus, they do not alter the basic character of the claims, and, if anything, make it even clearer that they pertain to a specific implementation of a technological improvement. Thus, for at least the same reasons that claim 13 is not directed to an abstract idea, claims 14-20 also are not directed to an abstract idea. *Cf. Thales Visionix*, 2017 WL 914618, at \*2 n.1 (“The parties do not agree to any representative claims, and TVI argues that the Claims Court erred by failing to separately consider the eligibility of dependent claims. Because we hold the independent claims patent eligible, we do

<sup>15</sup> In particular, claim 14 further restricts the “resource” to one of: “a call resource, a media resource, an incoming address resource, an account resource, and a caller identification (ID) resource.” '021 patent at col. 20:3-6.

<sup>16</sup> In particular, claims 15-18 take the method of claim 13 and more narrowly apply it to the use case of modifying call information through the API resource. '021 patent at col. 20:7-16. Claims 19-20 take the method of claim 13 and more narrowly apply it to the use case of altering the state of a telephony connection. *Id.* at col. 20:29-34.

not reach this issue.”).

**b. Claims 1-12 of the '021 Patent**

Independent claim 1 of the '021 patent recites the first seven same steps as claim 13. However, claim 1 differs from claim 13 in that it includes limitations relating to “modifying call router resources to alter the state of the call router,” whereas claim 13 does not require these steps. *Compare* '021 patent at col. 18:50-55, *with id.* at col. 19:35-20:2. Nevertheless, reading claim 1 in its entirety, it still concerns the functions of (1) translating a telephony session, and (2) providing API resources. *See id.* at col. 18:34-55. Claim 1 also still serves the purpose of enabling a modern application server to process traditional telephony sessions. *See id.* Thus, the steps of “modifying call router resources to alter the state of the call router” do not change claim 1’s focus from that of claim 13. These steps only make explicit what the steps relating to API resources in claim 13 imply: that the resources can be used to access and modify information stored at the call router. Thus, claim 1 of the '021 patent is “directed to” substantially the same concept as claim 13, and, on this basis is also not directed to an abstract idea.

Claims 2-12 of the '021 patent depend on claim 1. The additional limitations of these claims either place minor restrictions on certain elements of claim 1 or add further implementation detail.<sup>17</sup> As such, they do not alter the basic character of their respective claims and instead, if anything, make it clearer that these claims are directed to a specific implementation of a technological improvement. Thus, for at least the same reasons that claim 1 is not directed to an abstract idea, claims 2-12 also are not directed to an abstract idea.

**c. '376 Patent**

The '376 patent contains two independent claims: claim 1 and claim 24. Claims 1 and 24

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<sup>17</sup> In particular, claims 2 and 3 additionally require that state information is embedded into the URI; claims 6 and 7 additionally require that a digital signature is sent with the request; claim 4 restricts the protocol through which requests are sent and received; claim 5 restricts the way telephony instruction are encoded; claims 8, 9, and 12 restrict the type of telephony session that is involved; claim 11 restricts the type of API that is used to access the API resources; and claim 10 provides additional details about how telephony sessions are mapped to the API. '021 patent at col. 18:34-19:18.



of the '376 patent primarily differ from claim 13 of the '021 patent in that they do not specifically refer to a "call router" and each limits its steps to a "representational state transfer (REST) API." Compare '376 patent at col. 18:29-45, 20:8-30, with '021 patent at col. 19:19-20:2. However, both generally recite the functions of (1) translating a telephony session, and (2) providing API resources. See '376 patent at col. 18:29-45, 20:8-30. Claims 1 and 24 of the '376 patent share the same first twelve lines, and differ only in that claim 1 recites the steps of receiving an API request and providing a response, whereas claim 24 recites the steps of using a series of four API requests to initiate and then terminate a telephony session. See *id.* Assessing the entirety of each of these claims, the Court finds that they do not substantially differ from claim 13 of the '021 patent. Both serve the purpose of enabling a modern application server to process traditional telephony sessions, and can be reduced to the two basic functions of (1) translating a telephony session, and (2) providing API resources. Thus, for the same reasons that claim 1 of the '021 patent are not directed to an abstract idea, claims 1 and 24 of the '376 patent are not directed to an abstract idea.

Claims 2-23 of the '376 patent depend on claim 1 and claim 25 of the '376 patent depends on claim 24. As with the dependent claims of the '021 patent, all of the additional limitations in these dependent claims either narrow the scope of the claim by adding further method steps or provide additional implementation detail.<sup>18</sup> Accordingly, none these additional limitations alter the basic character of the dependent claims. Instead, if anything, the additional limitations provide further technical constraints that make it even clearer that the claims are directed to a specific implementation of a technological improvement. Thus, for at least the same reasons that claims 1 and 24 of the '376 patent are not directed to an abstract idea, their dependent claims also are not directed to an abstract idea.

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<sup>18</sup> Specifically, claims 2 and 16 restrict the specified API resource to a specific type; claims 20-22 restrict the telephony session to a certain type; and claims 3-19 and 25 impose restrictions that effectively confine the method of claim 1 to a specific use case (e.g., initiating a telephony session over a certain network, terminating a telephony session, transferring a telephony session, queueing a caller, retrieving a call log). '376 patent at col. 18:29-20:8, 20:37-39.

**d. '465 Patent**

The '465 patent recites four independent claims: 1 and 24-26. These claims all share the same first twelve lines, which recite steps similar to the telephony sessions translation steps of claim 13 of the '021 patent (specifically, mapping a URI to a telephony session, sending a request with embedded state information to the application server, receiving a response with telephony processing instructions). *Compare* '465 patent at col. 18:38-51, 20:3-13, 20:27-37, 20:44-53, *with* '021 patent at col. 19:19-20:2. They then differ in their final set(s) of steps: claim 1 generally recites the step of “executing telephony actions,” whereas claims 24-26 recite more specific use cases with specific sets of telephony actions. '465 patent at col. 18:38-51, 20:3-13, 20:27-37, 20:44-53.

Comparing these independent claims of the '465 patent to claim 13 of the '021 patent, these claims differ in one substantial way: none of the '465 claims recite the function of providing API resources. *Compare* '465 patent at col. 18:38-51, 20:3-13, 20:27-37, 20:44-53, *with* '021 patent at col. 19:19-20:2. This changes the “directed to” formulation from that of the '021 and '376 patents because it eliminates: “(2) providing API resources.” Accordingly, unlike the claims of the '021 and '376 patents, the claims of the '465 patents are directed to: enabling a modern application server to process traditional telephony sessions *through* translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them). Thus, the Court must determine whether this modified “directed to” statement is an abstract idea.

The Court concludes that it is not. For the majority of the same reasons stated above, the modified “directed to” statement still constitutes a specific improvement to telephony session processing technology. Above, the Court concluded that claim 13 addressed the “complexities and challenges” of implementing modern applications on traditional communications networks because claim 13 allowed modern applications to interact with traditional communication networks in a way that mimicked web-based programming. *See* Section III.C.1, *supra* (citing '021

patent at col. 2:1-18). This statement holds true for the independent claims of the '465 patent because, even though they do not recite API resources, they still recite translating telephony sessions [ . . . ],<sup>19</sup> which, as the Court concluded above, also allows interaction in a way that mimicked web-based programming. *See id.* Nothing in the claims or specification suggests that the API resources are required for the function of translating telephony sessions to operate and provide this benefit. *See generally* '021 patent at col. 8:7-12:64. Thus, the independent claims of the '465 patent can stand on their own as specific improvements to telephony session processing technology. Also above, the Court analyzed the function of translating telephony sessions in more detail and concluded that it constituted a specific, technical implementation. *See* Section III.C.1, *supra*. The independent claims of the '465 patent recite all of the same features upon which the Court based this conclusion: (1) sending embedded state information of the telephony session, (2) using an application layer protocol to communicate, (3) receiving instructions for sequential processing, and (4) processing those instructions. *Compare* '465 patent at col. 18:38-51, 20:3-13, 20:27-37, 20:44-53, *with* '021 patent at col. 19:19-20:2. Thus, this same conclusion holds true here. Accordingly, the independent claims of the '465 patent are directed to a specific, technical improvement in telephony session processing technology and are not directed to an abstract idea.

Claims 2-23 of the '465 patent depend on claim 1. All of the additional limitations in these dependent claims either narrow the scope of the claim by adding further method steps or provide additional implementation detail.<sup>20</sup> Accordingly, none of these additional limitations alter the basic character of the dependent claims. Instead, if anything, the additional limitations provide further technical constraints that make it even clearer that the dependent claims of the '465 patent

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<sup>19</sup> In full: translating telephony sessions (by sending embedded state information about the telephony session over an application layer protocol as a request for telephony processing instructions, receiving instructions for sequentially processing those instructions, and processing them).

<sup>20</sup> Specifically, claims 2 and 3 narrow the telephony communication to a specific type; claims 9-11 restrict the telephony endpoint to a specific type; claims 4-8 and 18-20 restrict the type of telephony action taken; claims 12 and 13 restrict the condition upon which a telephony session is initiated; claim 21 restricts what state information is embedded; and claims 14-17 and 23 further confine the method to a use case where there is a second application at a second URI. '465 patent at col. 18:55-20:3.

are directed to a specific implementation of a technological improvement. Thus, for at least the same reasons that claim 1 of the '465 patent are not directed to an abstract idea, the '465 dependent claims also are not directed to an abstract idea.

In sum, when separately assessed in light of the Court's conclusion with respect to claim 13 of the '021 patent, all of the claims across all of the Platform Patents are directed to an improvement in telephony session processing technology and not an abstract idea. Thus, they are not patent-ineligible under step one of *Alice*.

### 3. *Alice* Step Two for All Claims—Evaluation of Abstract Claims for an Inventive Concept

As discussed above, the claims of the Platform Patents are not directed to an abstract idea. Thus, they pass step one of *Alice*. In light of this conclusion, the Court follows the approach taken by the Federal Circuit and other courts in similar situations and does not reach step two. *Thales Visionix Inc.*, 2017 WL 914618, at \*5 (“Because we find the claims are not directed to an abstract idea, we need not proceed to step two.”); *Enfish*, 822 F.3d at 1339 (“[W]e think it is clear for the reasons stated that the claims are not directed to an abstract idea, and so we stop at step one.”).

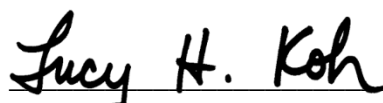
For the foregoing reasons, the Court finds that all of the claims in the Platform Patents recite patentable subject matter. Accordingly, the Court DENIES Defendant's Motion to Dismiss Plaintiff's claims for patent infringement as to the Platform Patents.

## IV. CONCLUSION

For the foregoing reasons, the Court GRANTS Defendant's Motion to Dismiss with respect to the Score Patents (the '926 and '833 patents) and DENIES Defendant's Motion to Dismiss with respect to the Platform Patents (the '021, '376, and '465 patents).

**IT IS SO ORDERED.**

Dated: March 31, 2017

  
LUCY H. KOH  
United States District Judge